Subject	Date
YMW820(NSX-1) MIDI 仕様書	2013 年 10 月 31 日
	Rev. 1.0

Channel Message

Events	Status byte (H) (n:Channel No.)	1st Data byte		2nd Data byte		Default	Voice			Note
		HEX	Parameter	HEX	Parameter		GM/RAS	SDI	eVocaloid	
Key Off	8n	00-7F	Key No.	00-7F	Velocity	--/--	○	×	○	
Key On	9n	00-7F	Key No.	00 01-7F	Key Off Key On	--/--	○	×	○	
Control Change	Bn	00	Bank Select MSB	00 08 7F	Normal Real Acoustic Sound (RAS) DrumKit	00	○	×	×	
		01	Modulation	00-7F	Data	00	○	×	○	
		05	Portamento Time	00-7F	Data	00	○	×	×	
		06	Data Entry MSB	00-7F	Data		○	×	○	
		07	Main Volume	00-7F	Data	64	○	○	○	Affects to volumes [1][7]. (See appendix)
		0A	Panpot	00-7F	L64...C...R63	40	○	○	×	Affects to volumes [2][7]. (See appendix)
		0B	Expression	00-7F	Data	7F	○	×	○	Affects to volumes [1][7]. (See appendix)
		20	Bank Select LSB	00-7F	Data	00	○	×	×	
		26	Data Entry LSB	00-7F	Data	--	○	×	○	
		40	Sustain (Damper)	00-7F	Data	--	○	×	○	
		41	Portamento	00-3F 40-7F	Data	00	○	×	×	
		42	Sostenuto	00-3F 40-7F	OFF ON	00	○	×	×	
		43	Soft Pedal	00-3F 40-7F	OFF ON	00	○	×	×	
		47	Harmonic Content	00-7F	-64...0...+63	40	○	×	×	
		48	Rlease Time	00-7F	-64...0...+63	40	○	×	×	
		49	Attack Time	00-7F	-64...0...+63	40	○	×	×	
		4A	Brightness	00-7F	-64...0...+63	40	○	×	×	
		4B	Decay Time	00-7F	-64...0...+63	40	○	×	×	
		4C	Vibrato Rate	00-7F	-64...0...+63	40	○	×	×	
		4D	Vibrato Depth	00-7F	-64...0...+63	40	○	×	×	
		4E	Vibrato Delay	00-7F	-64...0...+63	40	○	×	×	
		50	General Purpose Controller (Articulation 1)	00 7F	OFF ON	00	○(RAS only	×	×	
		51	General Purpose Controller (Articulation 2)	00 7F	OFF ON	00	○(RAS only	×	×	
		54	Portamento Control	00-7F	Key No.	--	○	×	×	
		5B	Effect1 Depth (Reverb Send Level)	00-7F	Data	40/10	○	○	○	Affects to volumes [4][9]. (See appendix)
		5D	Effect3 Depth (Chorus Send Level)	00-7F	Data	00	○	○	○	Affects to volumes [5][10]. (See appendix)
		5E	Effect4 Depth (Variation Send Level)	00-7F	Data	00	○	×	○	Affects to volumes [6][11]. (See appendix)
		60	RPN Increment	-	The data byte is ignored.	--	○	×	×	
		61	RPN Decrement	-	The data byte is ignored.	--	○	×	×	
		62	NRPN LSB	00-7F	Data	7F	○	×	○	
		63	NRPN MSB	00-7F	Data	7F	○	×	○	
		64	RPN LSB	00-7F	Data	7F	○	×	○	
		65	RPN MSB	00-7F	Data	7F	○	×	○	

Mode Message	Bn	78	All Sound Off	00	Data	--	○	×	○	
		79	Reset All Controllers	00	Data	--	○	×	○	
		7B	All Note Off	00	Data	--	○	×	○	
		7C	Omni Off	00	Data	--	○	×	×	
		7D	Omni On	00	Data	--	○	×	×	
		7E	Mono	0-10	Data	--	○	×	×	
		7F	Poly	00	Data	--	○	×	×	
Program Change	Cn	00-7F	Voice No.	-	-	00	○	×	×	
Channnel After Touch	Dn	00-7F	Data	-	-	00	○	×	×	
Polyphonic After Touch	An	00-7F	Key No.	00-7F	Data	--/00	○	×	×	
Pitch Bend Change	En	00-7F	LSB	00-7F	MSB	00/40	○	×	○	

RPN

RPN		Data Entry		Parameter	Data Range	Default	Voice			Note
MSB	LSB	MSB	LSB			(H)	GM/RAS	SDI	eVocaloid	
00	00	mm	−	Pitch Bend Sensitivity	mm : 00H−18H (0…+24 [semitones])	02	○	×	○	
00	01	mm	ll	Fine Tune	mm ll : 00H 00H −100[cent] … mm ll : 40H 00H 0[cent] … mm ll : 7FH 7FH 100[cent]	40/00	○	×	○	
00	02	mm	−	Coarse Tune	mm : 28H−40H−58H (−24…0…+24[semitones])	40	○	×	×	
00	05	mm	ll	Modulation Sensitivity	mm : Specified in semitone steps ll : Specified in 100/128 cent steps	00/40	○	×	×	
7F	7F	−	−	Null	−		○	○	○	

NRPN

NRPN		Data Entry		Parameter	Data Range	Default	Voice			Note
MSB	LSB	MSB	LSB			(H)	GM/RAS	SDI	eVocaloid	
01	08	mm	–	Vibrato Rate	mm : 00H-40H-7FH (-64...0...+63)	40	○	×	×	
01	09	mm	–	Vibrato Depth	mm : 00H-40H-7FH (-64...0...+63)	40	○	×	×	
01	0A	mm	–	Vibrato Delay	mm : 00H-40H-7FH (-64...0...+63)	40	○	×	×	
01	20	mm	–	Low Pass Filter Cutoff Frequency	mm : 00H-40H-7FH (-64...0...+63)	40	○	×	×	
01	21	mm	–	Low Pass Filter Resonance	mm : 00H-40H-7FH (-64...0...+63)	40	○	×	×	
01	63	mm	–	EG Attack Time	mm : 00H-40H-7FH (-64...0...+63)	40	○	×	×	
01	64	mm	–	EG Decay Time	mm : 00H-40H-7FH (-64...0...+63)	40	○	×	×	
01	66	mm	–	EG Release	mm : 00H-40H-7FH (-64...0...+63)	40	○	×	×	
14	rr	mm	–	Drum Low Pass Filter Cutoff Frequency	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	40	○(Drum Only)	×	×	
15	rr	mm	–	Drum Low Pass Filter Resonance	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	40	○(Drum Only)	×	×	
16	rr	mm	–	Drum EG Attack Rate	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	40	○(Drum Only)	×	×	
17	rr	mm	–	Drum EG Decay Rate	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	40	○(Drum Only)	×	×	
18	rr	mm	–	Drum Pitch Coarse	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	40	○(Drum Only)	×	×	
19	rr	mm	–	Drum Pitch Fine	rr : drum instrument note number mm : 00H-40H-7FH (-64...0...+63)	40	○(Drum Only)	×	×	
1A	rr	mm	–	Drum Level	rr : drum instrument note number mm : 00H-7FH (0...127)	Depends on the note	○(Drum Only)	×	×	Affects to volumes [1]. (See appendix)
1C	rr	mm	–	Drum Pan	rr : drum instrument note number mm : 00H, 01H-40H-7FH (RND,L63...C...R63)	Depends on the note	○(Drum Only)	×	×	Affects to volumes [2]. (See appendix)
1D	rr	mm	–	Drum Reverb Send Level	rr : drum instrument note number mm : 00H-7FH (0...127)	Depends on the note	○(Drum Only)	×	×	Affects to volumes [4]. (See appendix)
1E	rr	mm	–	Drum Chorus Send Level	rr : drum instrument note number mm : 00H-7FH (0...127)	Depends on the note	○(Drum Only)	×	×	Affects to volumes [5]. (See appendix)
1F	rr	mm	–	Drum Variation Send Level	rr : drum instrument note number mm : 00H-7FH (0...127) (Variation Connection = SYSTEM) mm : 00H, 01H-7FH (OFF, ON) (Variation Connection= INSERTION)	7F	○(Drum Only)	×	×	Affects to volumes [6]. (See appendix)
70	01	mm	–	Enable Auto Pitch Control	mm : 00H (Disable), 01H (Enable)	01	×	×	○	
70	02	mm	–	Enable Auto Dynamics Control	mm : 00H (Disable), 01H (Enable)	01	×	×	○	
70	03	mm	–	Vibrato type	mm : 00H-03H (00H:extreme,01H:fast,02H:normal,03H.slight)	02	×	×	○	
70	04	mm	–	Vibrato Rate	mm : 00H-7FH	40	×	×	○	
70	05	mm	–	Reserved						
70	06	mm	–	Reserved						
70	07	mm	ll	Vibrato Delay	Vibrato Delay = (mm<<7) | (ll) [msec]	00 00	×	×	○	
70	08	mm	–	Portamento Timing	mm : 00H-7FH (fast…slow)	00	×	×	○	New Portamento Timing affects eVocaloid after new lylics sending.
70	09	mm	–	Seek	mm : 00H-7FH (0 – 127)	--	×	×	○	
70	0A	mm	–	White Noise Control	mm : 00H-40H-7FH (-24dB...0dB...+24dB)	40	×	×	○	
70	0C	mm	–	Phoneme Unit Connect Type	mm: 00H Fixed 50 msec mode mm: 01H Minimum mode mm: 02H Verocity mode (*1)	01	×	×	○	
71	12	mm	–	Start of Phonetic Symbols	mm : 00H (Start of Phonetic), 01H-7FH (Reserved)	--	×	×	○	
71	13	mm	–	Phonetic Symbol	mm : 00H-7FH (ASCII)	--	×	×	○	
71	4F	mm	–	End of Phonetic Symbols	mm : 7FH (End of Phonetic symbols), 00H-7EH (Reserved)	--	×	×	○	

(*1) Verocity value changes not only verocity but phoneme's length.(00H(Max x2.0)---64H(typ x1.0)---7FH(min x0.5))

System Exclusive Messages

Event	Data Format	Voice GM/RAS	Voice SDI	Voice eVocaloid

Universal Real Time Messages

Event	Data Format	GM/RAS	SDI	eVocaloid
Master Volume	F0 7F XN 04 01 SS TT F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxnnnn XN = When N is received N=0-F,whichever is received. X=ignored 00000100 04 = Sub-ID #1=Device Control Message 00000001 01 = Sub-ID #2=Master Volume 0sssssss SS = Volume LSB 0ttttttt TT = Volume MSB 11110111 F7 = End of Exclusive	○	×	×
Master Fine Tuning	F0 7F XN 04 03 SS TT F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxnnnn XN = When N is received N=0-F,whichever is received. X=ignored 00000100 04 = Sub-ID #1=Device Control Message 00000011 03 = Sub-ID #2=Master Fine Tuning 0sssssss SS = Fine Tuning LSB 0ttttttt TT = Fine Tuning MSB 11110111 F7 = End of Exclusive	○	×	×
Master Coase Tuning	F0 7F XN 04 04 SS TT F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxnnnn XN = When N is received N=0-F,whichever is received. X=ignored 00000100 04 = Sub-ID #1=Device Control Message 00000100 04 = Sub-ID #2=Master Coarse Tuning 00000000 00 0ttttttt TT = Coarse Tuning MSB 11110111 F7 = End of Exclusive	○	×	×
Reverb Parameter	F0 7F XN 04 05 01 01 01 01 01 PP VV ... F7 11110000 F0 = Exclusive status 01111111 7F = Universal Real Time 0xxxnnnn XN = When N is received N=0-F,whichever is received. X=ignored 00000100 04 = Sub-ID #1=Device Control Message 00000101 05 = Sub-ID #2=Global Parameter Control 00000001 01 = Slot path length = 1 00000001 01 = Parameter ID width = 1 00000001 01 = Value width = 1 00000001 01 = Slot path MSB = 1 00000001 01 = Slot path LSB = 1 (Reverb) 0ppppppp PP = Parameter to be controlled. 0vvvvvvv VV = Value for the Parameter. : : 11110111 F7 = End of Exclusive	○	○	×

Parameter(pp)	Value(vv)	Display
pp=0 Reverb Type	0...8	0:RoomS 1:RoomM 2:RoomL 3:HallM 4:HallL(default) 8:GM Plate
pp=1 Reverb Time	0...127	0...11.0s

<table>
<tr><td>Chorus Parameter</td><td>F0 7F XN 04 05 01 01 01 01 02 PP VV ... F7
11110000 F0 = Exclusive status
01111111 7F = Universal Real Time
0xxxnnnn XN = When N is received N=0-F,whichever is received. X=ignored
00000100 04 = Sub-ID #1=Device Control Message
00000101 05 = Sub-ID #2=Global Parameter Control
00000001 01 = Slot path length = 1
00000001 01 = Parameter ID width = 1
00000001 01 = Value width = 1
00000001 01 = Slot path MSB = 1
00000010 02 = Slot path LSB = 2 (Chorus)
0ppppppp PP = Parameter to be controlled.
0vvvvvvv VV = Value for the Parameter.
: :
11110111 F7 = End of Exclusive

Parameter(pp) / Value(vv) / Display
pp=0 Chorus Type / 0...5 / 0:GM Chorus1, 1:GM Chorus2, 2:GM Chorus3(default), 3:GM Chorus4, 4:FB Chorus, 5:GM Flanger
pp=1 Mod Rate / 0...127 / 0...15.5Hz
pp=2 Mod Depth / 0...127
pp=3 Feedback / 0...127
pp=4 Send to Reverb / 0...127</td><td>○</td><td>○</td><td>×</td></tr>
<tr><td>Channel Pressure (Aftertouch)</td><td>F0 7F XN 09 01 0M PP RR ... F7
11110000 F0 = Exclusive status
01111111 7F = Universal Real Time
0xxxnnnn XN = When N is received N=0-F,whichever is received. X=ignored
00001001 09 = Sub-ID #1=Controller Destination Setting
00000001 01 = Sub-ID #2=Controller Type:01(Channel Pressure)
0000mmmm 0M = MIDI Channel (00-0F)
0ppppppp PP = Controlled Parameter
0rrrrrrr RR = Data
: :
11110111 F7 = End of Exclusive

Make sure to set both the controlled parameter and the range.
Parameters not set will be restored to their default values.

Control Parameter(pp) / Data(RR) / Description / Default Value
pp=00 Pitch Control / 28H-58H / -24...0...+24semitones / 40H
pp=01 Filter Cutoff Control / 00H-7FH / -9600...0...+9450cents / 40H
pp=02 Amplitude Control / 00H-7FH / -100...0...+100% / 40H
pp=03 LFO Pitch Depth / 00H-7FH / 0...127 / 00H
pp=04 LFO Filter Depth / 00H-7FH / 0...127 / 00H
pp=05 LFO Amplitude Depth / 00H-7FH / 0...127 / 00H</td><td>○</td><td>×</td><td>×</td></tr>
</table>

<table>
<tr><td>Controller
(Control Change)</td><td>F0 7F XN 09 03 0M CC PP RR ... F7

11110000 F0 = Exclusive status
01111111 7F = Universal Real Time
0xxxnnnn XN = When N is received N=0-F,whichever is received. X=ignored
00001001 09 = Sub-ID #1=Controller Destination Setting
00000011 03 = Sub-ID #2=Controller Type:03(Control Change)
0000mmmm 0M = MIDI Channel (00-0F)
0ccccccc CC = Controller Number (01H-1FH, 40H-5FH)
0ppppppp PP = Controlled Parameter
0rrrrrrr RR = Range
: :
11110111 F7 = End of Exclusive

Make sure to set both the controlled parameter and the range.
Parameters not set will be restored to their default values.

<table>
<tr><th>Control Parameter(pp)</th><th>Data(RR)</th><th>Description</th><th>Default Value</th></tr>
<tr><td>pp=00 Pitch Control</td><td>28H-58H</td><td>-24...0...+24semitones</td><td>40H</td></tr>
<tr><td>pp=01 Filter Cutoff Control</td><td>00H-7FH</td><td>-9600...0...+9450cents</td><td>40H</td></tr>
<tr><td>pp=02 Amplitude Control</td><td>00H-7FH</td><td>-100...0...+100%</td><td>40H</td></tr>
<tr><td>pp=03 LFO Pitch Depth</td><td>00H-7FH</td><td>0...127</td><td>00H</td></tr>
<tr><td>pp=04 LFO Filter Depth</td><td>00H-7FH</td><td>0...127</td><td>00H</td></tr>
<tr><td>pp=05 LFO Amplitude Depth</td><td>00H-7FH</td><td>0...127</td><td>00H</td></tr>
</table></td><td>○</td><td>×</td><td>×</td></tr>
<tr><td>Key-Based Instrument Control</td><td>F0 7F XN 0A 01 0M KK CC VV ... F7

11110000 F0 = Exclusive status
01111111 7F = Universal Real Time
0xxxnnnn XN = When N is received N=0-F,whichever is received. X=ignored
00001010 0A = Sub-ID #1=Key-Based Instrument Control
00000001 01 = Sub-ID #2=Controller
0000mmmm 0M = MIDI Channel (00-0F)
0kkkkkkk KK = Key Number
0ccccccc CC = Controller Number
0vvvvvvv VV = Value
: :
11110111 F7 = End of Exclusive

Make sure to set both the controlled number and the value.

<table>
<tr><th>Control Number(CC)</th><th>Value(VV)</th><th>Description</th><th>Default Value</th></tr>
<tr><td>CC=07H Volume</td><td>00H-7FH</td><td>-100...0...+100%</td><td>40H</td></tr>
<tr><td>CC=0AH Pan</td><td>00H-7FH</td><td>L63...C...R63</td><td>(Preset value)</td></tr>
<tr><td>CC=5BH Reverb Send Level</td><td>00H-7FH (absolute)</td><td>0...Max</td><td>(Preset value)</td></tr>
<tr><td>CC=5DH Chorus Send Level</td><td>00H-7FH (absolute)</td><td>0...Max</td><td>(Preset value)</td></tr>
</table></td><td>○(Drum Only)</td><td>×</td><td>×</td></tr>
</table>

Universal Non-Real Time Messages

<table>
<tr><td>GM1 System On</td><td>F0 7E XN 09 01 F7

11110000 F0 = Exclusive status
01111110 7E = Universal Non-Real Time
0xxxnnnn XN = When N is received N=0-F,whichever is received. X=ignored
00001001 09 = Sub-ID #1=General MIDI Message
00000001 01 = Sub-ID #2=General MIDI On
11110111 F7 = End of Exclusive</td><td>○</td><td>×</td><td>×</td></tr>
</table>

General MIDI System Off	F0 7E XN 09 02 F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxnnnn XN = When N is received N=0-F,whichever is received. X=ignored 00001001 09 = Sub-ID #1=General MIDI Message 00000010 02 = Sub-ID #2=General MIDI Off 11110111 F7 = End of Exclusive	○	×	×
Scale/Octave Tuning	F0 7E XN 08 08 JJ GG MM SS ... F7 11110000 F0 = Exclusive status 01111110 7E = Universal Non-Real Time 0xxxnnnn XN = When N is received N=0-F,whichever is received. X=ignored 00001000 08 = Sub-ID #1=MIDI Tuning Standard 00001000 08 = Sub-ID #2=scale/octave tuning 1byte form 0jjjjjjj JJ = Channel/option byte1 bits 0 to 1 = channel 15 to 16 bits 2 to 6 = reserved 0ggggggg GG= Channel byte2 - bits0 to 6 = channel 8 to 14 0mmmmmmm MM= Channel byte2 - bits0 to 6 = channel 1 to 7 0sssssss SS = 12byte tuning offset of 12 semitones from C to B 00H means -64cent 40H means 0cent 7FH means +63cent : : 11110111 F7 = End of Exclusive	○	×	×

XG

XG Parameter Changes	F0 43 1n 4C hh mm ll dd ... F7 11110000 F0 = Exclusive status 01000011 43 = YAMAHA ID 0001nnnn 1n = Device Number n=always 0(when transmit), n=0-F(when recieve) 01001100 4C = Model ID 0hhhhhhh hh = Address High 0mmmmmmm mm= Address Mid 0lllllll ll = Address Low 0ddddddd dd = Data : : 11110111 F7 = End of Exclusive	○	○	○

eVocaloid

Phonetic symbols	F0 43 79 09 00 50 1m dd ... F7 m Mode m=0(replace) / m=1(append) dd List of Phonetic symbols. Can accept only ASCII characters. Phoneme delimiter is Space[SP](0x20). Syllable delimiter is Comma[,](0x2C). Add NULL (0x00) as terminator to the end of list. ex.) o,h[SP]a,j[SP]o[NUL] eVocaloid is stored 128 Phonetic Alphabets.(See Appendix) The number of dd have to be under 128 byte.	×	×	○

XG Parameter Change table

XG SYSTEM

Address (H)			Size (H)	Data (H)	Parameter	Data Range	Default (H)	Voice GM/RAS	Voice SDI	Voice eVocaloid	Note
00	00	00	04	00-0F	MASTER TUNE	-102.4…0…+102.3[cent]	00				
		01		00-0F		1st bit3-0→bit15-12	40				
		02		00-0F		2nd bit3-0→bit11-8	00				
		03		00-0F		3rd bit3-0→bit7-4	00				
						4th bit3-0→bit3-0		○	×	×	
		04	01	00-7F	MASTER VOLUME	0…127	7F	○	×	×	
		06	01	28-58	TRANSPOSE	-24…0…+24 [semitones]	40	○	×	×	
		7D	01	N	DRUM SETUP RESET	N:Drum setup number	-	○(Drum Only)	×	×	
		7E	01	00	XG SYSTEM ON	00=XG system ON	-	○	×	×	
		7F	01	00	ALL PARAMETER RESET	00=ON	-	○	×	×	

EFFECT1

Address (H)			Size (H)	Data (H)	Parameter	Data Range	Default (H)	Voice GM/RAS	Voice SDI	Voice eVocaloid	Note
02	01	00	02	00-7F	REVERB TYPE MSB	Refer to Effect Parameter List	01(=HALL1)				
				00-7F	REVERB TYPE LSB	Refer to Effect Parameter List	00	○	○	○	
		02	01	00-7F	REVERB PARAMETER 1	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	
		03	01	00-7F	REVERB PARAMETER 2	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	
		04	01	00-7F	REVERB PARAMETER 3	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	
		05	01	00-7F	REVERB PARAMETER 4	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	
		06	01	00-7F	REVERB PARAMETER 5	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	
		07	01	00-7F	REVERB PARAMETER 6	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	
		08	01	00-7F	REVERB PARAMETER 7	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	
		09	01	00-7F	REVERB PARAMETER 8	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	
		0A	01	00-7F	REVERB PARAMETER 9	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	
		0B	01	00-7F	REVERB PARAMETER 10	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	
		0C	01	00-7F	REVERB RETURN	-∞dB…0dB…+6dB [0…64…127]	40	○	○	○	Affects to volumes [16]. (See appendix)
		0D	01	00-7F	REVERB PAN	L63…C…R63	40	○	○	○	Affects to volumes [15]. (See appendix)

Address (H)			Size (H)	Data (H)	Parameter	Data Range	Default (H)	Voice GM/RAS	Voice SDI	Voice eVocaloid	Note
02	01	10	01	00-7F	REVERB PARAMETER 11	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	
		11	01	00-7F	REVERB PARAMETER 12	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	
		12	01	00-7F	REVERB PARAMETER 13	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	
		13	01	00-7F	REVERB PARAMETER 14	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	
		14	01	00-7F	REVERB PARAMETER 15	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	
		15	01	00-7F	REVERB PARAMETER 16	Refer to Effect Parameter List	Depends on Reverb Type	○	○	○	

Address (H)			Size (H)	Data (H)	Parameter	Data Range	Default (H)	Voice GM/RAS	Voice SDI	Voice eVocaloid	Note
02	01	20	02	00-7F	CHORUS TYPE MSB	Refer to Effect Parameter List	41(=CHORUS1)				
				00-7F	CHORUS TYPE LSB	Refer to Effect Parameter List	00	○	○	○	
		22	01	00-7F	CHORUS PARAMETER 1	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	
		23	01	00-7F	CHORUS PARAMETER 2	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	
		24	01	00-7F	CHORUS PARAMETER 3	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	
		25	01	00-7F	CHORUS PARAMETER 4	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	
		26	01	00-7F	CHORUS PARAMETER 5	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	
		27	01	00-7F	CHORUS PARAMETER 6	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	

		28	01	00-7F	CHORUS PARAMETER 7	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	
		29	01	00-7F	CHORUS PARAMETER 8	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	
		2A	01	00-7F	CHORUS PARAMETER 9	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	
		2B	01	00-7F	CHORUS PARAMETER 10	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	
		2C	01	00-7F	CHORUS RETURN	-∞dB…0dB…+6dB [0…64…127]	40	○	○	○	Affects to volumes [18]. (See appendix)
		2D	01	00-7F	CHORUS PAN	L63…C…R63	40	○	○	○	Affects to volumes [17]. (See appendix)
		2E	01	00-7F	SEND CHORUS TO REVERB	-∞dB…0dB…+6dB [0…64…127]	00	○	○	○	Affects to volumes [12]. (See appendix)

02	01	30	01	00-7F	CHORUS PARAMETER 11	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	
		31	01	00-7F	CHORUS PARAMETER 12	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	
		32	01	00-7F	CHORUS PARAMETER 13	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	
		33	01	00-7F	CHORUS PARAMETER 14	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	
		34	01	00-7F	CHORUS PARAMETER 15	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	
		35	01	00-7F	CHORUS PARAMETER 16	Refer to Effect Parameter List	Depends on Chorus Type	○	○	○	

02	01	40	02	00-7F 00-7F	VARIATION TYPE MSB VARIATION TYPE LSB	Refer to Effect Parameter List Refer to Effect Parameter List	05(=DELAY LCR) 00	○	○	○	
		42	02	00-7F 00-7F	VARIATION PARAMETER 1 MSB VARIATION PARAMETER 1 LSB	Refer to Effect Parameter List Refer to Effect Parameter List	Depends on Variation Type	○	○	○	
		44	02	00-7F 00-7F	VARIATION PARAMETER 2 MSB VARIATION PARAMETER 2 LSB	Refer to Effect Parameter List Refer to Effect Parameter List	Depends on Variation Type	○	○	○	
		46	02	00-7F 00-7F	VARIATION PARAMETER 3 MSB VARIATION PARAMETER 3 LSB	Refer to Effect Parameter List Refer to Effect Parameter List	Depends on Variation Type	○	○	○	
		48	02	00-7F 00-7F	VARIATION PARAMETER 4 MSB VARIATION PARAMETER 4 LSB	Refer to Effect Parameter List Refer to Effect Parameter List	Depends on Variation Type	○	○	○	
		4A	02	00-7F 00-7F	VARIATION PARAMETER 5 MSB VARIATION PARAMETER 5 LSB	Refer to Effect Parameter List Refer to Effect Parameter List	Depends on Variation Type	○	○	○	
		4C	02	00-7F 00-7F	VARIATION PARAMETER 6 MSB VARIATION PARAMETER 6 LSB	Refer to Effect Parameter List Refer to Effect Parameter List	Depends on Variation Type	○	○	○	
		4E	02	00-7F 00-7F	VARIATION PARAMETER 7 MSB VARIATION PARAMETER 7 LSB	Refer to Effect Parameter List Refer to Effect Parameter List	Depends on Variation Type	○	○	○	
		50	02	00-7F 00-7F	VARIATION PARAMETER 8 MSB VARIATION PARAMETER 8 LSB	Refer to Effect Parameter List Refer to Effect Parameter List	Depends on Variation Type	○	○	○	
		52	02	00-7F 00-7F	VARIATION PARAMETER 9 MSB VARIATION PARAMETER 9 LSB	Refer to Effect Parameter List Refer to Effect Parameter List	Depends on Variation Type	○	○	○	
		54	02	00-7F 00-7F	VARIATION PARAMETER 10 MSB VARIATION PARAMETER 10 LSB	Refer to Effect Parameter List Refer to Effect Parameter List	Depends on Variation Type	○	○	○	
		56	01	00-7F	VARIATION RETURN	-∞dB…0dB…+6dB [0…64…127]	40	○	○	○	Affects to volumes [20]. (See appendix)
		57	01	00-7F	VARIATION PAN	L63…C…R63	40	○	○	○	Affects to volumes [19]. (See appendix)

		58	01	00-7F	SEND VARIATION TO REVERB	-∞dB…0dB…+6dB [0…64…127]	00	○	○	○	Affects to volumes [13]. (See appendix)
		59	01	00-7F	SEND VARIATION TO CHORUS	-∞dB…0dB…+6dB [0…64…127]	00	○	○	○	Affects to volumes [14]. (See appendix)
		5A	01	00-7F	VARIATION CONNECTION	INSERTION, SYSTEM	00	○	○	×	
		5B	01	00-7F	VARIATION PART NUMBER	Part1…16(0…15) SDI(64,65) OFF(127)	7F	○	○	○	
		5C	01	00-7F	MW VARIATION CONTROL DEPTH	-64…0…+63	40	○	○	○	
		5D	01	00-7F	BEND VARIATION CONTROL DEPTH	-64…0…+63	40	○	○	○	
		5E	01	00-7F	CAT VARIATION CONTROL DEPTH	-64…0…+63	40	○	○	○	
		5F	01	00-7F	AC1 VARIATION CONTROL DEPTH	-64…0…+63	40	○	○	○	
		60	01	00-7F	AC2 VARIATION CONTROL DEPTH	-64…0…+63	40	○	○	○	

02	01	70	01	00-7F	VARIATION PARAMETER 11	Refer to Effect Parameter List	Depends on Variation Type	○	○	○	
		71	01	00-7F	VARIATION PARAMETER 12	Refer to Effect Parameter List	Depends on Variation Type	○	○	○	
		72	01	00-7F	VARIATION PARAMETER 13	Refer to Effect Parameter List	Depends on Variation Type	○	○	○	
		73	01	00-7F	VARIATION PARAMETER 14	Refer to Effect Parameter List	Depends on Variation Type	○	○	○	
		74	01	00-7F	VARIATION PARAMETER 15	Refer to Effect Parameter List	Depends on Variation Type	○	○	○	
		75	01	00-7F	VARIATION PARAMETER 16	Refer to Effect Parameter List	Depends on Variation Type	○	○	○	

Multi EQ

02	40	00	01	00-04	EQ TYPE	flat, jazz, pops, rock, classic	00	○	○	○	
		01	01	34-4C	EQ GAIN1	-12…0…+12[dB]	40	○	○	○	
		02	01	04-28	EQ FREQUENCY1	32…2.0k[Hz]	0C	○	○	○	
		03	01	01-78	EQ Q1	0.1…12.0	07	○	○	○	
		04	01	00-01	EQ SHAPE1	shelving, peaking	00	○	○	○	
		05	01	34-4C	EQ GAIN2	-12…0…+12[dB]	40	○	○	○	
		06	01	0E-36	EQ FREQUENCY2	100…10.0k[Hz]	1C	○	○	○	
		07	01	01-78	EQ Q2	0.1…12.0	07	○	○	○	
		08	01		NOT USED						
		09	01	34-4C	EQ GAIN3	-12…0…+12[dB]	40	○	○	○	
		0A	01	0E-36	EQ FREQUENCY3	100…10.0k[Hz]	22	○	○	○	
		0B	01	01-78	EQ Q3	0.1…12.0	07	○	○	○	
		0C	01		NOT USED						
		0D	01	34-4C	EQ GAIN4	-12…0…+12[dB]	40	○	○	○	
		0E	01	0E-36	EQ FREQUENCY4	100…10.0k[Hz]	2E	○	○	○	
		0F	01	01-78	EQ Q4	0.1…12.0	07	○	○	○	
		10	01		NOT USED						
		11	01	34-4C	EQ GAIN5	-12…0…+12[dB]	40	○	○	○	
		12	01	1C-3A	EQ FREQUENCY5	0.5k…16.0k[Hz]	34	○	○	○	
		13	01	01-78	EQ Q5	0.1…12.0	07	○	○	○	
		14	01	00-01	EQ SHAPE5	shelving, peaking	00	○	○	○	

Multi Part

08	nn	00	01		NOT USED			○	×	×	
		01	01	00-7F	BANK SELECT MSB	0…127	part10=7F, other parts=00	○	×	×	
		02	01	00-7F	BANK SELECT LSB	0…127	00	○	×	×	
		03	01	00-7F	PROGRAM NUMBER	1…128	00	○	×	×	
		04	01	00-0F, 7F	Rcv CHANNEL	1…16, OFF	Part No.	○	×	×	
		05	01	00-01	MONO/POLY MODE	MONO, POLY	01	○	×	×	
		06	01	00-02	SAME NOTE NUMBER KEY ON ASSIGN	SINGLE, MULTI, INST (for Drum)	01	○	×	×	

		07	01	00-03	PART MODE	NORMAL, DRUM, DRUMS1…2	part10=02, other parts=00	○	×	×	
		08	01	28-58	NOTE SHIFT	-24…0…+24[semitones]	40	○	×	×	
		09 0A	02	00-7F 00-7F	DETUNE	-12.8…0…+12.7[Hz] 1st bit3-0→bit7-4 2nd bit3-0→bit3-0	08 00	○	×	×	
		0B	01	00-7F	VOLUME	0…127	64	○	×	×	Affects to volumes [1]. (See appendix)
		0C	01	00-7F	VELOCITY SENSE DEPTH	0…127	40	○	×	×	
		0D	01	00-7F	VELOCITY SENSE OFFSET	0…127	40	○	×	×	
		0E	01	00-7F	PAN	RND,L63…C…R63	40	○	×	×	Affects to volumes [2]. (See appendix)
		0F	01	00-7F	NOTE LIMIT LOW	C-2…G8	00	○	×	×	
		10	01	00-7F	NOTE LIMIT HIGH	C-2…G8	7F	○	×	×	
		11	01	00-7F	DRY LEVEL	0…127	7F	○	×	×	Affects to volumes [3]. (See appendix)
		12	01	00-7F	CHORUS SEND	0…127	00	○	×	×	Affects to volumes [5]. (See appendix)
		13	01	00-7F	REVERVE SEND	0…127	28	○	×	×	Affects to volumes [4]. (See appendix)
		14	01	00-7F	VARIATION SEND	0…127	00	○	×	×	Affects to volumes [6]. (See appendix)
		15	01	00-7F	VIBRATO RATE	-64…0…+63	40	○	×	×	
		16	01	00-7F	VIBRATO DEPTH	-64…0…+63	40	○	×	×	
		17	01	00-7F	VIBRATO DELAY	-64…0…+63	40	○	×	×	
		18	01	00-7F	FILTER CUTOFF FREQUENCY	-64…0…+63	40	○	×	×	
		19	01	00-7F	FILTER RESONANCE	-64…0…+63	40	○	×	×	
		1A	01	00-7F	EG ATTACK TIME	-64…0…+63	40	○	×	×	
		1B	01	00-7F	EG DECAY TIME	-64…0…+63	40	○	×	×	
		1C	01	00-7F	EG RELEASE TIME	-64…0…+63	40	○	×	×	
		1D	01	28-58	MW PITCH CONTROL	-24…0…+24[semitones]	40	○	×	×	
		1E	01	00-7F	MW LOW PASS FILTER CONTROL	-9600…0…+9450[cent]	40	○	×	×	
		1F	01	00-7F	MW AMPLITUDE CONTROL	-100…0…+100[%]	40	○	×	×	
		20	01	00-7F	MW LFO PMOD DEPTH	0…127	0A	○	×	×	
		21	01	00-7F	MW LFO FMOD DEPTH	0…127	00	○	×	×	
		22	01	00-7F	MW LFO AMOD DEPTH	0…127	00	○	×	×	
		23	01	28-58	BEND PITCH CONTROL	-24…0…+24[semitones]	42	○	×	×	
		24	01	00-7F	BEND LOW PASS FILTER CONTROL	-9600…0…+9450[cent]	40	○	×	×	
		25	01	00-7F	BEND AMPLITUDE CONTROL	-100…0…+100[%]	40	○	×	×	
		26	01	00-7F	BEND LFO PMOD DEPTH	0…127	00	○	×	×	
		27	01	00-7F	BEND LFO FMOD DEPTH	0…127	00	○	×	×	
		28	01	00-7F	BEND LFO AMOD DEPTH	0…127	00	○	×	×	
		30	01	00-01	Rcv PITCH BEND	OFF, ON	01	○	×	×	
		31	01	00-01	Rcv CH AFTER TOUCH(CAT)	OFF, ON	01	○	×	×	
		32	01	00-01	Rcv PROGRAM CHANGE	OFF, ON	01	○	×	×	
		33	01	00-01	Rcv CONTROL CHANGE	OFF, ON	01	○	×	×	
		34	01	00-01	Rcv POLY AFTER TOUCH(PAT)	OFF, ON	01	○	×	×	
		35	01	00-01	Rcv NOTE MESSAGE	OFF, ON	01	○	×	×	
		36	01	00-01	Rcv RPN	OFF, ON	01	○	×	×	
		37	01	00-01	Rcv NRPN	OFF, ON	XGmode=01, GMmode=00	○	×	×	
		38	01	00-01	Rcv MODULATION	OFF, ON	01	○	×	×	
		39	01	00-01	Rcv VOLUME	OFF, ON	01	○	×	×	
		3A	01	00-01	Rcv PAN	OFF, ON	01	○	×	×	
		3B	01	00-01	Rcv EXPRESSION	OFF, ON	01	○	×	×	
		3C	01	00-01	Rcv HOLD1	OFF, ON	01	○	×	×	
		3D	01	00-01	Rcv PORTAMENTO	OFF, ON	01	○	×	×	
		3E	01	00-01	Rcv SOSTENUTO	OFF, ON	01	○	×	×	
		3F	01	00-01	Rcv SOFT PEDAL	OFF, ON	01	○	×	×	
		40	01	00-01	Rcv BANK SELECT	OFF, ON	01	○	×	×	

		41	01	00-7F	SCALE TUNING C	-64…0…+63[cent]	40	○	×	×	
		42	01	00-7F	SCALE TUNING C#	-64…0…+63[cent]	40	○	×	×	
		43	01	00-7F	SCALE TUNING D	-64…0…+64[cent]	40	○	×	×	
		44	01	00-7F	SCALE TUNING D#	-64…0…+65[cent]	40	○	×	×	
		45	01	00-7F	SCALE TUNING E	-64…0…+66[cent]	40	○	×	×	
		46	01	00-7F	SCALE TUNING F	-64…0…+67[cent]	40	○	×	×	
		47	01	00-7F	SCALE TUNING F#	-64…0…+68[cent]	40	○	×	×	
		48	01	00-7F	SCALE TUNING G	-64…0…+69[cent]	40	○	×	×	
		49	01	00-7F	SCALE TUNING G#	-64…0…+70[cent]	40	○	×	×	
		4A	01	00-7F	SCALE TUNING A	-64…0…+71[cent]	40	○	×	×	
		4B	01	00-7F	SCALE TUNING A#	-64…0…+72[cent]	40	○	×	×	
		4C	01	00-7F	SCALE TUNING B	-64…0…+73[cent]	40	○	×	×	
		4D	01	28-58	CAT PITCH CONTROL	-24…0…+24[semitones]	40	○	×	×	
		4E	01	00-7F	CAT LOW PASS FILTER CONTROL	-9600…0…+9450[cent]	40	○	×	×	
		4F	01	00-7F	CAT AMPLITUDE CONTROL	-100…0…+100[%]	40	○	×	×	
		50	01	00-7F	CAT LFO PMOD DEPTH	0…127	00	○	×	×	
		51	01	00-7F	CAT LFO FMOD DEPTH	0…127	00	○	×	×	
		52	01	00-7F	CAT LFO AMOD DEPTH	0…127	00	○	×	×	
		53	01	28-58	PAT PITCH CONTROL	-24…0…+24[semitones]	40	○	×	×	
		54	01	00-7F	PAT LOW PASS FILTER CONTROL	-9600…0…+9450[cent]	40	○	×	×	
		55	01	00-7F	PAT AMPLITUDE CONTROL	-100…0…+100[%]	40	○	×	×	
		56	01	00-7F	PAT LFO PMOD DEPTH	0…127	00	○	×	×	
		57	01	00-7F	PAT LFO FMOD DEPTH	0…127	00	○	×	×	
		58	01	00-7F	PAT LFO AMOD DEPTH	0…127	00	○	×	×	
		59	01	00-5F	AC1 CONTROLLER NUMBER	0…95	10	○	×	×	
		5A	01	28-58	AC1 PITCH CONTROL	-24…0…+24[semitones]	40	○	×	×	
		5B	01	00-7F	AC1 LOW PASS FILTER CONTROL	-9600…0…+9450[cent]	40	○	×	×	
		5C	01	00-7F	AC1 AMPLITUDE CONTROL	-100…0…+100[%]	40	○	×	×	
		5D	01	28-58	AC1 LFO PMOD DEPTH	0…127	00	○	×	×	
		5E	01	00-7F	AC1 LFO FMOD DEPTH	0…127	00	○	×	×	
		5F	01	00-7F	AC1 LFO AMOD DEPTH	0…127	00	○	×	×	
		60	01	00-5F	AC2 CONTROLLER NUMBER	0…95	11	○	×	×	
		61	01	28-58	AC2 PITCH CONTROL	-24…0…+24[semitones]	40	○	×	×	
		62	01	00-7F	AC2 LOW PASS FILTER CONTROL	-9600…0…+9450[cent]	40	○	×	×	
		63	01	00-7F	AC2 AMPLITUDE CONTROL	-100…0…+100[%]	40	○	×	×	
		64	01	00-7F	AC2 LFO PMOD DEPTH	0…127	00	○	×	×	
		65	01	00-7F	AC2 LFO FMOD DEPTH	0…127	00	○	×	×	
		66	01	00-7F	AC2 LFO AMOD DEPTH	0…127	00	○	×	×	
		67	01	00-01	PORTAMENTO SWITCH	OFF, ON	00	○	×	×	
		68	01	00-7F	PORTAMENTO TIME	0…127	00	○	×	×	
		69	01	00-7F	PITCH EG INITIAL LEVEL	-64…0…+63	40	○	×	×	
		6A	01	00-7F	PITCH EG ATTACK TIME	-64…0…+63	40	○	×	×	
		6B	01	00-7F	PITCH EG RELEASE LEVEL	-64…0…+63	40	○	×	×	
		6C	01	00-7F	PITCH EG RELEASE TIME	-64…0…+63	40	○	×	×	
		6D	01	01-7F	VELOCITY LIMIT LOW	1…127	01	○	×	×	
		6E	01	01-7F	VELOCITY LIMIT HIGH	1…127	7F	○	×	×	
0A	nn	40	01	00-7F	MW OFFSET LEVEL CONTROL	-100…0…+100[%]	40	○	×	×	
		41	01	00-7F	BEND OFFSET LEVEL CONTROL	-100…0…+100[%]	40	○	×	×	
		42	01	00-7F	CAT OFFSET LEVEL CONTROL	-100…0…+100[%]	40	○	×	×	
		43	01	00-7F	PAT OFFSET LEVEL CONTROL	-100…0…+100[%]	40	○	×	×	
		44	01	00-7F	AC1 OFFSET LEVEL CONTROL	-100…0…+100[%]	40	○	×	×	
		45	01	00-7F	AC2 OFFSET LEVEL CONTROL	-100…0…+100[%]	40	○	×	×	

SDI Part

10	0n	00	01		NOT USED						
		01	01		NOT USED						
		02	01		NOT USED						
		03	01		NOT USED						
		04	01	00-0F, 7F	Rcv CHANNEL	1…16, OFF	7F	×	○	×	
		05	01		NOT USED						
		06	01		NOT USED						
		07	01		NOT USED						
		08	01		NOT USED						
		09	01		NOT USED						
		0A	01		NOT USED						
		0B	01	00-7F	VOLUME	0…127	0	×	○	×	Affects to volumes [7]. (See appendix)
		0C	01		NOT USED						
		0D	01		NOT USED						
		0E	01	00-7F	PAN	RND,L63…C…R63	40	×	○	×	Affects to volumes [7]. (See appendix)
		0F	01		NOT USED						
		10	01		NOT USED						
		11	01	00-7F	DRY LEVEL	0…127	7F	×	○	×	Affects to volumes [8]. (See appendix)
		12	01	00-7F	CHORUS SEND	0…127	00	×	○	×	Affects to volumes [10]. (See appendix)
		13	01	00-7F	REVERB SEND	0…127	00	×	○	×	Affects to volumes [9]. (See appendix)
		14	01	00-7F	VARIATION SEND	0…127	00	×	○	×	Affects to volumes [11]. (See appendix)

DRUM Setup

3n	rr	00	01	00-7F	PITCH COARSE	-64…0…+63	40	○(Drum Only)	×	×	
		01	01	00-7F	PITCH FINE	-64…0…+63[cent]	40	○(Drum Only)	×	×	
		02	01	00-7F	LEVEL	0…127	Depends on the note	○(Drum Only)	×	×	Affects to volumes [1]. (See appendix)
		03	01	00-7F	ALTERNATE GROUP	OFF, 1…127	Depends on the note	○(Drum Only)	×	×	
		04	01	00-7F	PAN	RND, L63…C…R63	Depends on the note	○(Drum Only)	×	×	Affects to volumes [2]. (See appendix)
		05	01	00-7F	REVERB SEND	0…127	Depends on the note	○(Drum Only)	×	×	Affects to volumes [4]. (See appendix)
		06	01	00-7F	CHORUS SEND	0…127	Depends on the note	○(Drum Only)	×	×	Affects to volumes [5]. (See appendix)
		07	01	00-7F	VARIATION SEND	0…127	7F	○(Drum Only)	×	×	Affects to volumes [6]. (See appendix)
		08	01	00-01	KEY ASSIGN	SINGLE, MULTI	00	○(Drum Only)	×	×	
		09	01	00-01	Rcv NOTE OFF	OFF, ON	Depends on the note	○(Drum Only)	×	×	
		0A	01	00-01	Rcv NOTE ON	OFF, ON	01	○(Drum Only)	×	×	
		0B	01	00-7F	LOW PASS FILTER CUTOFF FREQUENCY	-64…0…+63	40	○(Drum Only)	×	×	
		0C	01	00-7F	LOW PASS FILTER RESONANCE	-64…0…+63	40	○(Drum Only)	×	×	
		0D	01	00-7F	EG ATTACK RATE	-64…0…+63	40	○(Drum Only)	×	×	
		0E	01	00-7F	EG DECAY1 RATE	-64…0…+63	40	○(Drum Only)	×	×	
		0F	01	00-7F	EG DECAY2 RATE	-64…0…+63	40	○(Drum Only)	×	×	

EffectType

Reverb Block

No.	Type	Description	MSB	LSB
1	HALL1	Reverb simulating the acoustics of a hall.	1	0
2	HALL2		1	16
3	HALL3		1	17
4	HALL4		1	18
5	HALL5		1	1
6	HALL M		1	6
7	HALL L		1	7
8	ROOM1	Reverb simulating the acoustics of a room.	2	16
9	ROOM2		2	17
10	ROOM3		2	18
11	ROOM4		2	19
12	ROOM5		2	0
13	ROOM6		2	1
14	ROOM7		2	2
15	ROOM S		2	5
16	ROOM M		2	6
17	ROOM L		2	7
18	STAGE1	Reverb suitable for a solo instrument.	3	16
19	STAGE2		3	17
20	STAGE3		3	0
21	STAGE4		3	1
22	PLATE1	Reverb simulating a plate reverb unit.	4	16
23	PLATE2		4	17
24	PLATE3		4	0
25	GM PLATE		4	7
26	WHITE ROOM	A unique short reverb with a bit of initial delay.	16	0
27	TUNNEL	Simulates a cylindrical space expanding to left and right.	17	0
28	CANYON	A hypothetical acoustic space which extends without limit.	18	0
29	BASEMENT	A bit of initial delay followed by reverb with a unique resonance.	19	0
	NO EFFECT	No effect.	0	0

Chorus Block

No.	Type	Description	MSB	LSB
1	CHORUS1	Conventional chorus program with rich, warm chorusing.	66	17
2	CHORUS2		66	8
3	CHORUS3		66	16
4	CHORUS4		66	1
5	CHORUS5		65	2
6	CHORUS6		65	0
7	CHORUS7		65	1
8	CHORUS8		65	8
9	GM CHORUS1		65	3
10	GM CHORUS2		65	4
11	GM CHORUS3		65	5
12	GM CHORUS4		65	6
13	FB CHORUS		65	7
14	CELESTE1	A 3-phase LFO adds modulation and spaciousness to the sound.	66	0
15	CELESTE2		66	2
16	FLANGER1	Creates a sound reminiscent of a jet airplane.	67	8
17	FLANGER2		67	16
18	FLANGER3		67	17
19	FLANGER4		67	1
20	FLANGER5		67	0
21	GM FLANGER		67	7
22	SYMPHONIC1	Adds more stages to the modulation of Celeste.	68	16
23	SYMPHONIC2		68	0
24	ROTARY SP5 （Rotary Speaker5）	Simulates a rotary speaker.	66	18
	NO EFFECT	No effect.	0	0

Variation Block

No.	Type	Description	MSB	LSB
1	HALL1	Reverb simulating the acoustics of a hall.	1	0
2	HALL2		1	16
3	HALL3		1	17
4	HALL4		1	18
5	HALL5		1	1
6	HALL M		1	6
7	HALL L		1	7
8	ROOM1	Reverb simulating the acoustics of a room.	2	16
9	ROOM2		2	17
10	ROOM3		2	18
11	ROOM4		2	19
12	ROOM5		2	0
13	ROOM6		2	1
14	ROOM7		2	2
15	ROOM S		2	5
16	ROOM M		2	6
17	ROOM L		2	7
18	STAGE1	Reverb suitable for a solo instrument.	3	16
19	STAGE2		3	17
20	STAGE3		3	0
21	STAGE4		3	1
22	PLATE1	Reverb simulating a plate reverb unit.	4	16
23	PLATE2		4	17
24	PLATE3		4	0
25	GM PLATE		4	7
26	WHITE ROOM	A unique short reverb with a bit of initial delay.	16	0
27	TUNNEL	Simulates a cylindrical space expanding to left and right.	17	0
28	CANYON	A hypothetical acoustic space which extends without limit.	18	0
29	BASEMENT	A bit of initial delay followed by reverb with a unique resonance.	19	0
30	DELAY LCR1	Produces three delayed sounds: L, R and C (center).	5	16
31	DELAY LCR2		5	0
32	DELAY LR	Produces two delayed sounds: L and R. Two feedback delays are provided.	6	0
33	ECHO	Two delayed sounds (L and R), and independent feedback delays for L and R.	7	0
34	CROSS DELAY	The feedback of the two delayed sounds is crossed.	8	0
35	TEMPO DELAY	Tempo-synchronized delay.	21	0
36	TEMPO ECHO	Tempo-synchronized echo.	21	8
37	TEMPO CROSS	Tempo-synchronized cross delay.	22	0
38	KARAOKE1	Echo for karaoke.	20	0
39	KARAOKE2		20	1
40	KARAOKE3		20	2
41	ER1	This effect isolates only the early reflection components of the reverb.	9	0
42	ER2		9	1
43	GATE REVERB	Simulation of gated reverb.	10	0
44	REVERS GATE	Simulation of gated reverb played back in reverse.	11	0
45	CHORUS1	Conventional chorus program with rich, warm chorusing.	66	17
46	CHORUS2		66	8
47	CHORUS3		66	16
48	CHORUS4		66	1
49	CHORUS5		65	2
50	CHORUS6		65	0
51	CHORUS7		65	1
52	CHORUS8		65	8
53	GM CHORUS1		65	3
54	GM CHORUS2		65	4
55	GM CHORUS3		65	5
56	GM CHORUS4		65	6
57	FB CHORUS			
58	CELESTE1	A 3-phase LFO adds modulation and spaciousness to the sound.	66	0
59	CELESTE2		66	2
60	SYMPHONIC1	Adds more stages to the modulation of Celeste.	68	16
61	SYMPHONIC2		68	0
62	ENS DETUNE (Ensemble Detune)	Chorus effect without modulation, created by adding a slightly pitch-shifted sound.	87	0
63	FLANGER1	Creates a sound reminiscent of a jet airplane.	67	8
64	FLANGER2		67	16
65	FLANGER3		67	17
66	FLANGER4		67	1
67	FLANGER5		67	0
68	GM FLANGER		67	7
69	T_FLANGER		107	0

No.	Name	Full name	Description	MSB	LSB
70	PHASER1			72	0
71	PHASER2			72	8
72	EP PHASER2		Cyclically modulates the phase to add modulation to the sound.	72	18
73	EP PHASER3			72	16
74	T_PHASER			108	0
75	DIST HEAVY	(Distortion Heavy)	Heavy distortion.	73	0
76	ST DIST	(Stereo Distortion)	Stereo distortion.	73	8
77	COMP+DIST1	(Compressor + Distortion1)	Since a Compressor is included in the first stage, steady distortion can be produced regardless of changes in input level.	73	16
78	COMP+DIST2	(Compressor + Distortion2)		73	1
79	OVERDRIVE		Adds mild distortion to the sound.	74	0
80	ST OD	(Stereo Overdrive)	Stereo overdrive.	74	8
81	DIST HARD1	(Distortion Hard)	Hard-edge distortion.	75	16
82	DIST HARD2	(Distortion Hard2)		75	22
83	DIST SOFT1	(Distortion Soft)	Soft, warm distortion.	75	17
84	DIST SOFT2	(Distortion Soft2)		75	23
85	ST DIST HARD	(Stereo Distortion Hard)	Hard-edge stereo distortion.	75	18
86	ST DIST SOFT	(Stereo Distortion Soft)	Soft, warm soft distortion.	75	19
87	V_DIST HARD	(V Distortion Hard)		98	0
88	V_DIST SOFT	(V Distortion Soft)	Distortion which simulates the sound of a vintage tube, fuzz effect, etc.	98	2
89	AMP SIM1	(Amp Simulator 1)	A simulation of a guitar amp.	75	0
90	AMP SIM2	(Amp Simulator 2)		75	1
91	ST AMP1	(Stereo Amp Simulator1)		75	20
92	ST AMP2	(Stereo Amp Simulator2)		75	21
93	ST AMP3	(Stereo Amp Simulator3)	Stereo amp simulator.	75	8
94	ST AMP4	(Stereo Amp Simulator4)		75	24
95	ST AMP5	Stereo Amp Simulator5		75	25
96	ST AMP6	Stereo Amp Simulator6		75	26
97	DST+DELAY1	(Distortion + Delay1)	Distortion and Delay are connected in series.	95	16
98	DST+DELAY2	(Distortion + Delay2)		95	0
99	OD+DELAY1	(Overdrive + Delay1)	Overdrive and Delay are connected in series.	95	17
100	OD+DELAY2	(Overdrive + Delay2)		95	1
101	CMP+DST+DLY1	(Compressor + Distortion + Delay1)	Compressor, Distortion and Delay are connected in series.	96	16
102	CMP+DST+DLY2	(Compressor + Distortion + Delay2)		96	0
103	CMP+OD+DLY1	(Compressor + Overdrive + Delay1)	Compressor, Overdrive and Delay are connected in series.	96	17
104	CMP+OD+DLY2	(Compressor + Overdrive + Delay2)		96	1
105	V_DST H+DLY	(V Distortion Hard + Delay)	V Distortion Hard and Delay are connected in series.	98	1
106	V_DST S+DLY	(V Distortion Soft + Delay)	V Distortion Soft and Delay are connected in series.	98	3
107	DST+TDLY	(Distortion + Tempo Delay)	Distortion and Tempo Delay are connected in series.	100	0
108	OD+TDLY	(Overdrive + Tempo Delay)	Overdrive and Tempo Delay are connected in series.	100	1
109	CMP+DST+TDL	(Compressor + Distortion + Tempo Delay)	Compressor, Distortion and Tempo Delay are connected in series.	101	0
110	CMP+OD+TDLY1	(Compressor + Overdrive + Tempo Delay1)		101	1
111	CMP+OD+TDLY2	(Compressor + Overdrive + Tempo Delay2)		101	16
112	CMP+OD+TDLY3	(Compressor + Overdrive + Tempo Delay3)	Compressor, Overdrive and Tempo Delay are connected in series.	101	17
113	CMP+OD+TDLY4	(Compressor + Overdrive + Tempo Delay4)		101	18
114	CMP+OD+TDLY5	(Compressor + Overdrive + Tempo Delay5)		101	19
115	CMP+OD+TDLY6	(Compressor + Overdrive + Tempo Delay6)		101	20
116	V_DST H+TDLY1	(V Distortion Hard + Tempo Delay)	V Distortion Hard and Tempo Delay are connected in series.	103	0
117	V_DST S+TDL1	(V Distortion Soft + Tempo Delay1)	V Distortion Soft and Tempo Delay are connected in series.	103	1
118	PITCH CHG1	(Pitch Change1)		80	16
119	PITCH CHG2	(Pitch Change2)	Changes the pitch of the input signal.	80	0
120	PITCH CHG3	(Pitch Change3)		80	1
121	AUTO WAH1		Cyclically modulates the center frequency of a wah filter.	78	16
122	AUTO WAH2			78	0
123	AT WAH+DST1	(Auto Wah + Distortion1)	The output of an Auto Wah can be distorted by Distortion.	78	17
124	AT WAH+DST2	(Auto Wah + Distortion2)		78	1
125	AT WAH+OD1	(Auto Wah + Overdrive1)	The output of an Auto Wah can be distorted by Overdrive.	78	18
126	AT WAH+OD2	(Auto Wah + Overdrive2)		78	2
127	TOUCH WAH1			82	0
128	TOUCH WAH2		Changes the center frequency of a wah filter according to the input level.	82	8
129	TC WAH+DST1	(Touch Wah + Distortion1)	The output of an Touch Wah can be distorted by Distortion.	82	16
130	TC WAH+DST2	(Touch Wah + Distortion2)		82	1
131	TC WAH+OD1	(Touch Wah + Overdrive1)	The output of an Touch Wah can be distorted by Overdrive.	82	17
132	TC WAH+OD2	(Touch Wah + Overdrive2)		82	2
133	CLAVI TC WAH	(Clavi Touch Wah)	Clavinet Touch Wah	82	18
134	EP TC WAH	(EP Touch Wah)	EP Touch Wah	82	19
135	WH+DST+DLY1	(Wah + Distortion + Delay1)	Wah, Distortion and Delay are connected in series.	97	16
136	WH+DST+DLY2	(Wah + Distortion + Delay2)		97	0
137	WH+DST+TDLY	(Wah + Distortion + Tempo Delay)	Wah, Distortion and Tempo Delay are connected in series.	102	0
138	WH+OD+DLY1	(Wah + Overdrive + Delay1)	Wah, Overdrive and Delay are connected in series.	97	17
139	WH+OD+DLY2	(Wah + Overdrive + Delay2)		97	1
140	WH+OD+TDLY1	(Wah + Overdrive + Tempo Delay1)	Wah, Overdrive and Tempo Delay are connected in series.	102	1
141	WH+OD+TDLY2	(Wah + Overdrive + Tempo Delay2)		102	16
142	MBAND COMP		Multi-band compressor that allows you to adjust the compression effect for individual frequency bands.	105	0

143	COMPRESSOR		Holds down the output level when a specified input level is exceeded. A sense of attack can also be added to the sound.	83	0
144	NOISE GATE		Gates the input when the input signal falls below a specified level.	84	0
145	ROTARY SP1	(Rotary Speaker1)	Simulates a rotary speaker.	69	16
146	ROTARY SP2	(Rotary Speaker2)		71	17
147	ROTARY SP3	(Rotary Speaker3)		71	18
148	ROTARY SP4	(Rotary Speaker4)		70	17
149	ROTARY SP5	(Rotary Speaker5)		66	18
150	ROTARY SP6	(Rotary Speaker6)		69	0
151	ROTARY SP7	(Rotary Speaker7)		71	22
152	2WAY ROT SP	(2way Rotary Speaker)		86	0
153	DST+ROT SP	(Distortion + Rotary Speaker)	Distortion and rotary speaker connected in series.	69	1
154	DST+2ROT SP	(Distortion + 2way Rotary Speaker)	Distortion and 2-way rotary speaker connected in series.	86	1
155	OD+ROT SP	(Overdrive + Rotary Speaker)	Overdrive and rotary speaker connected in series.	69	2
156	OD+2ROT SP	(Overdrive + 2way Rotary Speaker)	Overdrive and 2-way rotary speaker connected in series.	86	2
157	AMP+ROT SP	(Amp Simulator + Rotary Speaker)	Amp simulator and rotary speaker connected in series.	69	3
158	AMP+2ROT SP	(Amp Simulator + 2way Rotary Speaker)	Amp simulator and 2-way rotary speaker connected in series.	86	3
159	DUAL ROT SP1	(Dual Rotor Speaker1)	Rotary speaker simulation with speed switching.	99	0
160	DUAL ROT SP2	(Dual Rotor Speaker2)		99	1
161	TREMOLO1		Rich Tremolo effect with both volume and pitch modulation.	70	16
162	TREMOLO2			71	19
163	TREMOLO3			70	0
164	EP TREMOLO			70	18
165	GT TREMOLO1	(Guitar Tremolo1)		71	20
166	GT TREMOLO2	(Guitar Tremolo2)		70	19
167	AUTO PAN1		Several panning effects that automatically shift the sound position (left, right, front, back).	71	16
168	AUTO PAN2			71	0
169	EP AUTOPAN			71	21
170	AUTO PAN3			71	1
171	EQ DISCO		Equalizer effect that boosts both high and low frequencies, as is typical in most disco music.	76	16
172	EQ TEL		Equalizer effect that cuts both high and low frequencies, to simulate the sound heard through a telephone receiver.	76	17
173	2BAND EQ		A stereo EQ with adjustable LOW and HIGH. Ideal for drum Parts.	77	0
174	3BAND EQ		A mono EQ with adjustable LOW, MID, and HIGH equalizing.	76	0
175	HM ENHANCE1	(Harmonic Enhancer1)	Adds new harmonics to the input signal to make the sound stand out.	81	16
176	HM ENHANCE2	(Harmonic Enhancer2)		81	0
177	ST 3BAND EQ		An EQ which allows equalization of low, mid and high bands.	76	18
178	VCE CANCEL	(Voice Cancel)	Attenuates the vocal part of a CD or other source.	85	0
179	AMBIENCE		Blurs the stereo positioning of the sound to add spatial width.	88	0
180	TALKING MOD	(Talking Modulation)	Adds a vowel sound to the input signal.	93	0
181	ISOLATOR		Controls the level of a specified frequency band of the input signal.	115	0
	NO EFFECT		No effect.	0	0
	THRU		Bypass without applying an effect.	64	0

EffectParameterList

Parameters marked with a ● in the "Control"column only affect insertion type effects.

HALL1/2/3/4/5, HALL M/L,
ROOM1/2/3/4/5/6/7, ROOM S/M/L,
STAGE1/2/3/4, PLATE1/2/3, GM PLATE

1

No.	Parameter	Display	Value	See Table	Control
1	Reverb Time	0.3~30.0s	0-69	table#4	
2	Diffusion	0~10	0-10		
3	Initial Delay	0.1mS~99.3mS	0-63	table#5	
4	HPF Cutoff	Thru~8.0kHz	0-52	table#3	
5	LPF Cutoff	1.0k~Thru	34-60	table#3	
6					
8					
9					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127	(table#15)	●
11	Rev Delay	0.1mS~39.5mS	0-25	table#5	
12	Density	0~4	0-4		
13	Er/Rev Balance	E63>R ~ E=R ~ E<R63	1-127		
14	High Damp	0.1~1.0	1-10		
15	Feedback Level	-63~+63	1-127	(table#16)	
16					

DELAY LCR1/2

2

No.	Parameter	Display	Value	See Table	Control
1	Lch Delay	0.1~743.0ms	1-7430		
2	Rch Delay	0.1~743.0ms	1-7430		
3	Cch Delay	0.1~743.0ms	1-7430		
4	Feedback Delay	0.1~743.0ms	1-7430		
5	Feedback Level	-63~+63	1-127	(table#16)	
6	Cch Level	0~127	0-127	(table#18)	
7	High Damp	0.1~1.0	1-10		
8					
9					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127	(table#15)	●
11					
12					
13	EQ Low Frequency	32Hz~2.0kHz	4-40	table#3	
14	EQ Low Gain	-12~+12dB	52-76		
15	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
16	EQ High Gain	-12~+12dB	52-76		

DELAY LR

3

No.	Parameter	Display	Value	See Table	Control
1	Lch Delay	0.1~743.0ms	1-7430		
2	Rch Delay	0.1~743.0ms	1-7430		
3	Feedback Delay 1	0.1~743.0ms	1-7430		
4	Feedback Delay 2	0.1~743.0ms	1-7430		
5	Feedback Level	-63~+63	1-127	(table#16)	
6	High Damp	0.1~1.0	1-10		
7					
8					
9					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127	(table#15)	●
11					
12					
13	EQ Low Frequency	32Hz~2.0kHz	4-40	table#3	
14	EQ Low Gain	-12~+12dB	52-76		
15	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
16	EQ High Gain	-12~+12dB	52-76		

ECHO

4

No.	Parameter	Display	Value	See Table	Control
1	Lch Delay1	0.1~371.5ms	1-3715		
2	Lch Feedback Level	-63~+63	1-127	(table#16)	
3	Rch Delay1	0.1~371.5ms	1-3715		
4	Rch Feedback Level	-63~+63	1-127	(table#16)	
5	High Damp	0.1~1.0	1-10		
6	Lch Delay2	0.1~371.5ms	1-3715		
7	Rch Delay2	0.1~371.5ms	1-3715		
8	Delay2 Level	0~127	0-127	(table#18)	
9					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127	(table#15)	●
11					
12					
13	EQ Low Frequency	32Hz~2.0kHz	4-40	table#3	
14	EQ Low Gain	-12~+12dB	52-76		
15	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
16	EQ High Gain	-12~+12dB	52-76		

CROSS DELAY

5

No.	Parameter	Display	Value	See Table	Control
1	L->R Delay	0.1~371.5ms	1-3715		
2	R->L Delay	0.1~371.5ms	1-3715		
3	Feedback Level	-63~+63	1-127	(table#16)	
4	Input Select	L,R,L&R	0-2		
5	High Damp	0.1~1.0	1-10		
6					
7					
8					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127	(table#15)	●
11					
12					
13	EQ Low Frequency	32Hz~2.0kHz	4-40	table#3	
14	EQ Low Gain	-12~+12dB	52-76		
15	EQ High Frequency	500Hz~16.0kHz	28-58	table#3	
16	EQ High Gain	-12~+12dB	52-76		

ER1/2

6

No.	Parameter	Display	Value	See Table	Control
1	Type	S-H, L-H, Rdm, Rvs, Plt, Spr	0-5		
2	Room Size	0.1~7.0	0-44	table#6	
3	Diffusion	0~10	0-10		
4	Initial Delay	0.1mS~200.0mS	0-127	table#5	
5	Feedback Level	-63~+63	1-127	(table#16)	
6	HPF Cutoff	Thru~8.0kHz	0-52	table#3	
7	LPF Cutoff	1.0k~Thru	34-60	table#3	
8					
9					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127	(table#15)	●
11	Liveness	0~10	0-10		
12	Density	0~3	0-3		
13	High Damp	0.1~1.0	1-10		
14					
15					
16					

GATE REVERB
REVERSE GATE

7

No.	Parameter	Display	Value	See Table	Control
1	Type	TypeA,TypeB	0-1		
2	Room Size	0.1~7.0	0-44	table#6	
3	Diffusion	0~10	0-10		
4	Initial Delay	0.1mS~200.0mS	0-127	table#5	
5	Feedback Level	-63~+63	1-127	(table#16)	
6	HPF Cutoff	Thru~8.0kHz	0-52	table#3	
7	LPF Cutoff	1.0k~Thru	34-60	table#3	
8					
9					
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127	(table#15)	●
11	Liveness	0~10	0-10		
12	Density	0~3	0-3		
13	High Damp	0.1~1.0	1-10		
14					
15					
16					

WHITE ROOM, TUNNEL, CANYON, BASEMENT

8

No.	Parameter	Display	Value	See Table	Control
1	Reverb Time	0.3~30.0s	0-69	table#4	
2	Diffusion	0~10	0-10		
3	Initial Delay	0.1mS~99.3mS	0-127	table#5	
4	HPF Cutoff	Thru~8.0kHz	0-52	table#3	
5	LPF Cutoff	1.0k~Thru	34-60	table#3	
6	Width	0.5~10.2m	0-37	table#11	
7	Height	0.5~20.2m	0-73	table#11	
8	Depth	0.5~30.2m	0-104	table#11	
9	Wall Vary	0~30	0-30		
10	Dry/Wet	D63>W ~ D=W ~ D<W63	1-127	(table#15)	●
11	Rev Delay	0.1mS~39.5mS	0-25	table#5	
12	Density	0~4	0-4		
13	Er/Rev Balance	E63>R ~ E=R ~ E<R63	1-127		
14	High Damp	0.1~1.0	1-10		
15	Feedback Level	-63~+63	1-127	(table#16)	
16					

KARAOKE1/2/3

9

No.	Parameter	Display	Value	See Table	Control
1	Delay Time	0.1mS～400.0mS	0-127	table#7	
2	Feedback Level	-63～+63	1-127	(table#16)	
3	HPF Cutoff	Thru～8.0kHz	0-52	table#3	
4	LPF Cutoff	1.0k～Thru	34-60	table#3	
5					
6					
7					
8					
9					
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	●
11	Density	0～3	0-3		
12					
13					
14					
15					
16					

FLANGER1-5, GM FLANGER

13

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz～39.7Hz	0-127	table#1	
2	LFO Depth	0～127	0-127	(table#19)	
3	Feedback Level	-63～+63	1-127	(table#17)	
4	Delay Offset	0.0mS～50mS	0-127	table#2	
5					
6	EQ Low Frequency	32Hz～2.0kHz	4-40	table#3	
7	EQ Low Gain	-12～+12dB	52-76		
8	EQ High Frequency	500Hz～16.0kHz	28-58	table#3	
9	EQ High Gain	-12～+12dB	52-76		
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	●
11	EQ Mid Frequency (*)	100Hz～10.0kHz	14-54	table#3	
12	EQ Mid Gain (*)	-12～+12dB	52-76		
13	EQ Mid Width (*)	0.1～12.0	1-120		
14	LFO Phase Difference	-180～+180deg(resolution=3deg.)	4-124		
15					
16					

TEMPO DELAY, TEMPO ECHO

10

No.	Parameter	Display	Value	See Table	Control
1	Delay Time	64th/3 - 4thx6	0-19	table#14	
2	Feedback Level	-63 - +63	1-127	(table#16)	
3	Feedback High Dump	0.1 - 1.0	1-10		
4	L/R Diffusion	1(-63ms)-64(0ms)-127(63ms)	1-127		
5	Lag	1(-63ms)-64(0ms)-127(63ms)	1-127		
6					
7					
8					
9					
10	Dry/Wet	D63>W - D=W - D<W=63	1-127	(table#15)	●
11					
12					
13	EQ Low Frequency	32-2.0kH	4-40		
14	EQ Low Gain	-12 - +12dB	52-76		
15	EQ High Frequency	500 - 16.0kHz	28-58		
16	EQ High Gain	-12 - +12dB	52-76		

SYMPHONIC1/2

14

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz～39.7Hz	0-127	table#1	
2	LFO Depth	0～127	0-127	(table#19)	
3	Delay Offset	0.0mS～50mS	0-127	table#2	
4					
5					
6	EQ Low Frequency	32Hz～2.0kHz	4-40	table#3	
7	EQ Low Gain	-12～+12dB	52-76		
8	EQ High Frequency	500Hz～16.0kHz	28-58	table#3	
9	EQ High Gain	-12～+12dB	52-76		
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	●
11	EQ Mid Frequency (*)	100Hz～10.0kHz	14-54	table#3	
12	EQ Mid Gain (*)	-12～+12dB	52-76		
13	EQ Mid Width (*)	0.1～12.0	1-120		
14					
15					
16					

TEMPO CROSS

MSB = 22

11

No.	Parameter	Display	Value	See Table	Control
1	Delay Time L>R	64th/3 - 4thx6	0-19	table#14	
2	Delay Time R>L	64th/3 - 4thx6	0-19	table#14	
3	Feedback Level	-63 - +63	1-127	(table#16)	
4	Input Select	L, R, L&R	0-2		
5	Feedback High Dump	0.1 - 1.0	1-10		
6	Lag	1(-63ms)-64(0ms)-127(63ms)	1-127		
7					
8					
9					
10	Dry/Wet	D63>W - D=W - D<W=63	1-127	(table#15)	●
11					
12					
13	EQ Low Frequency	32-2.0kH	4-40		
14	EQ Low Gain	-12 - +12dB	52-76		
15	EQ High Frequency	500 - 16.0kHz	28-58		
16	EQ High Gain	-12 - +12dB	52-76		

ROTARY SP1/6

15

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz～39.7Hz	0-127	table#1	●
2	LFO Depth	0～127	0-127	(table#19)	
3					
4					
5					
6	EQ Low Frequency	32Hz～2.0kHz	4-40	table#3	
7	EQ Low Gain	-12～+12dB	52-76		
8	EQ High Frequency	500Hz～16.0kHz	28-58	table#3	
9	EQ High Gain	-12～+12dB	52-76		
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	
11	EQ Mid Frequency (*)	100Hz～10.0kHz	14-54	table#3	
12	EQ Mid Gain (*)	-12～+12dB	52-76		
13	EQ Mid Width (*)	0.1～12.0	1-120		
14					
15					
16					

CHORUS1-8, GM CHORUS1-4
FB CHORUS, CELESTE1-2, ROTARY SP5

12

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz～39.7Hz	0-127	table#1	
2	LFO Depth	0～127	0-127	(table#19)	
3	Feedback Level	-63～+63	1-127	(table#17)	
4	Delay Offset	0.0mS～50mS	0-127	table#2	
5					
6	EQ Low Frequency	32Hz～2.0kHz	4-40	table#3	
7	EQ Low Gain	-12～+12dB	52-76		
8	EQ High Frequency	500Hz～16.0kHz	28-58	table#3	
9	EQ High Gain	-12～+12dB	52-76		
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	●
11	EQ Mid Frequency (*)	100Hz～10.0kHz	14-54	table#3	
12	EQ Mid Gain (*)	-12～+12dB	52-76		
13	EQ Mid Width (*)	0.1～12.0	1-120		
14					
15	Input Mode	mono/stereo	0-1		
16					

DST+ROT SP, OD+ROT SP

16

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.0-39.7Hz	0-127	table#1	●
2	LFO Depth	0-127	0-127	(table#19)	
3					
4					
5					
6	EQ Low Frequency	32-2.0kHz	4-40	table#3	
7	EQ Low Gain	-12 - +12dB	52-76		
8	EQ High Frequency	500 - 16.0kHz	28-58	table#3	
9	EQ High Gain	-12 - +12dB	52-76		
10	Dry/Wet	D63>W - D=W - D<W=63	1-127	(table#15)	
11					
12					
13					
14	Drive	0-127	0-127		
15	LPF Cuttoff	1kHz-Thru	34-60	table#3	
16	Output Level	0-127	0-127	(table#18)	

AMP+ROT SP

17

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.0-39.7Hz	0-127	table#1	●
2	LFO Depth	0-127	0-127	(table#19)	
3	AMP Type	Off,Stack,Combo,Tube	0-3		
4					
5					
6	EQ Low Frequency	32-2.0kHz	4-40	table#3	
7	EQ Low Gain	-12 - +12dB	52-76		
8	EQ High Frequency	500 - 16.0kHz	28-58	table#3	
9	EQ High Gain	-12 - +12dB	52-76		
10	Dry/Wet	D63>W - D=W - D<W=63	1-127	(table#15)	
11					
12					
13					
14	Drive	0-127	0-127		
15	LPF Cuttoff	1kHz-Thru	34-60	table#3	
16	Output Level	0-127	0-127	(table#18)	

TREMOLO1/3, EP TREMOLO, GT TREMOLO2, ROTARY SP4

18

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz〜39.7Hz	0-127	table#1	●
2	AM Depth	0〜127	0-127		
3	PM Depth	0〜127	0-127		
4					
5					
6	EQ Low Frequency	32Hz〜2.0kHz	4-40	table#3	
7	EQ Low Gain	-12〜+12dB	52-76		
8	EQ High Frequency	500Hz〜16.0kHz	28-58	table#3	
9	EQ High Gain	-12〜+12dB	52-76		
10					
11	EQ Mid Frequency (*)	100Hz〜10.0kHz	14-54	table#3	
12	EQ Mid Gain (*)	-12〜+12dB	52-76		
13	EQ Mid Width (*)	0.1〜12.0	1-120		
14	LFO Phase Difference	-180〜+180deg(resolution=3deg.)	4-124		
15	Input Mode	mono/stereo	0-1		
16					

AUTO PAN1/2, EP AUTOPAN, TREMOLO2, GT TREMOLO1, ROTARY SP2/3/7

19

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz〜39.7Hz	0-127	table#1	●
2	L/R Depth	0〜127	0-127		
3	F/R Depth	0〜127	0-127		
4	PAN Direction	L<->R,L->R,L<-R,Lturn,Rturn,L/R	0-5		
5					
6	EQ Low Frequency	32Hz〜2.0kHz	4-40	table#3	
7	EQ Low Gain	-12〜+12dB	52-76		
8	EQ High Frequency	500Hz〜16.0kHz	28-58	table#3	
9	EQ High Gain	-12〜+12dB	52-76		
10					
11	EQ Mid Frequency (*)	100Hz〜10.0kHz	14-54	table#3	
12	EQ Mid Gain (*)	-12〜+12dB	52-76		
13	EQ Mid Width (*)	0.1〜12.0	1-120		
14					
15					
16					

AUTO PAN3

20

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz〜39.7Hz	0-127	table#1	●
2	L/R Depth	0〜127	0-127		
3	F/R Depth	0〜127	0-127		
4	PAN Direction	L<->R,L->R,L<-R,Lturn,Rturn,L/R	0-5		
5	LFO Wave	0〜28	0-28		
6	EQ Low Frequency	32Hz〜2.0kHz	4-40	table#3	
7	EQ Low Gain	-12〜+12dB	52-76		
8	EQ High Frequency	500Hz〜16.0kHz	28-58	table#3	
9	EQ High Gain	-12〜+12dB	52-76		
10					
11	EQ Mid Frequency (*)	100Hz〜10.0kHz	14-54	table#3	
12	EQ Mid Gain (*)	-12〜+12dB	52-76		
13	EQ Mid Width (*)	0.1〜12.0	1-120		
14					
15	Input Mode	mono,stereo	0-1		
16					

PHASER 1, EP PHASER1-3

21

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz〜39.7Hz	0-127	table#1	
2	LFO Depth	0〜127	0-127	(table#19)	
3	Phase Shift Offset	0〜127	0-127		
4	Feedback Level	-63〜+63	1-127	(table#16)	
5					
6	EQ Low Frequency	32Hz〜2.0kHz	4-40	table#3	
7	EQ Low Gain	-12〜+12dB	52-76		
8	EQ High Frequency	500Hz〜16.0kHz	28-58	table#3	
9	EQ High Gain	-12〜+12dB	52-76		
10	Dry/Wet	D63>W 〜 D=W 〜 D<W63	1-127	(table#15)	●
11	Stage	4〜22 (*1)	4-22		
12	Diffusion	mono/stereo	0-1		
13					
14					
15					
16					

PHASER 2

22

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz〜39.7Hz	0-127	table#1	
2	LFO Depth	0〜127	0-127	(table#19)	
3	Phase Shift Offset	0〜127	0-127		
4	Feedback Level	-63〜+63	1-127	(table#16)	
5					
6	EQ Low Frequency	32Hz〜2.0kHz	4-40	table#3	
7	EQ Low Gain	-12〜+12dB	52-76		
8	EQ High Frequency	500Hz〜16.0kHz	28-58	table#3	
9	EQ High Gain	-12〜+12dB	52-76		
10	Dry/Wet	D63>W 〜 D=W 〜 D<W63	1-127	(table#15)	●
11	Stage	3〜11	3-11		
12					
13	LFO Phase Difference	-180deg〜+180deg(resolution=3deg.)	4-124		
14					
15					
16					

DIST HEAVY

OVERDRIVE

23

No.	Parameter	Display	Value	See Table	Control
1	Drive	0〜127	0-127		●
2	EQ Low Frequency	32Hz〜2.0kHz	4-40	table#3	
3	EQ Low Gain	-12〜+12dB	52-76		
4	LPF Cutoff	1.0k〜Thru	34-60	table#3	
5	Output Level	0〜127	0-127	(table#18)	
6					
7	EQ Mid Frequency	100Hz〜10.0kHz	14-54	table#3	
8	EQ Mid Gain	-12〜+12dB	52-76		
9	EQ Mid Width	0.1〜12.0	1-120		
10	Dry/Wet	D63>W 〜 D=W 〜 D<W63	1-127	(table#15)	
11	Edge(Clip Curve)	0〜127(mild〜sharp)	0-127		
12					
13					
14					
15					
16					

COMP+DIST1/2

24

No.	Parameter	Display	Value	See Table	Control
1	Drive	0〜127	0-127		●
2	EQ Low Frequency	32Hz〜2.0kHz	4-40	table#3	
3	EQ Low Gain	-12〜+12dB	52-76		
4	LPF Cutoff	1.0k〜Thru	34-60	table#3	
5	Output Level	0〜127	0-127	(table#18)	
6					
7	EQ Mid Frequency	100Hz〜10.0kHz	14-54	table#3	
8	EQ Mid Gain	-12〜+12dB	52-76		
9	EQ Mid Width	0.1〜12.0	1-120		
10	Dry/Wet	D63>W 〜 D=W 〜 D<W63	1-127	(table#15)	
11	Edge(Clip Curve)	0〜127(mild〜sharp)	0-127		
12	Attack	1ms〜40ms	0-19	table#8	
13	Release	10ms〜680ms	0-15	table#9	
14	Threshold	-48dB〜-6dB	79-121		
15	Ratio	1.0〜20.0	0-7	table#10	
16					

25 ST DIST, ST_OD

No.	Parameter	Display	Value	See Table	Control
1	Drive	0～127	0-127		●
2	EQ Low Frequency	32-2.0kHz	4-40	table#3	
3	EQ Low Gain	-12 - +12dB	52-76		
4	LPF Cuttoff	1kHz-Thru	34-60		
5	Output Level	0～127	0-127	(table#18)	
6					
7	EQ Mid Frequency	100 - 10.0kHz	14-54	table#3	
8	EQ Mid Gain	-12 - +12dB	52-76		
9	EQ Mid Width	0.1～12.0	1-120		
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	
11	Edge(Clip Curve)	0～127	0-127		
12					
13					
14					
15					
16					

29 3BAND EQ, EQ DISCO, EQ TEL, ST 3BAND EQ

No.	Parameter	Display	Value	See Table	Control
1	EQ Low Gain	-12～+12dB	52-76		
2	EQ Mid Frequency	100Hz～16.0kHz	14-58	table#3	
3	EQ Mid Gain	-12～+12dB	52-76		
4	EQ Mid Width	0.1～12.0	1-120		
5	EQ High Gain	-12～+12dB	52-76		
6	EQ Low Frequency	50Hz～2.0kHz	8-40	table#3	
7	EQ High Frequency	500Hz～16.0kHz	28-58	table#3	
8					
9					
10					
11					
12					
13					
14					
15	Input Mode	mono/stereo	0-1		
16					

26 AMP SIM1

No.	Parameter	Display	Value	See Table	Control
1	Drive	0～127	0-127		●
2	AMP Type	Off,Stack,Combo,Tube	0-3		
3	LPF Cutoff	1.0k～Thru	34-60	table#3	
4	Output Level	0～127	0-127	(table#18)	
5					
6					
7					
8					
9					
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	
11	Edge(Clip Curve)	0～127(mild～sharp)	0-127		
12					
13					
14					
15					
16					

30 2BAND EQ

No.	Parameter	Display	Value	See Table	Control
1	EQ Low Frequency	32Hz～2.0kHz	4-40	table#3	
2	EQ Low Gain	-12～+12dB	52-76		
3	EQ High Frequency	500Hz～16.0kHz	28-58	table#3	
4	EQ High Gain	-12～+12dB	52-76		
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

27 AMP SIM2

No.	Parameter	Display	Value	See Table	Control
1	Drive	0～127	0-127		●
2	AMP Type	Off,Stack,Combo,Tube, Crunch,Hi gain,British	0-6		
3	LPF Cutoff	1.0k～Thru	34-60	table#3	
4	Output Level	0～127	0-127	(table#18)	
5					
6					
7					
8					
9					
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	
11					
12					
13					
14					
15					
16					

31 AUTO WAH1/2

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz～39.7Hz	0-127	table#1	
2	LFO Depth	0～127	0-127	(table#19)	
3	Cutoff Frequency Offset	0～127	0-127		●
4	Resonance	1.0～12.0	10-120		
5					
6	EQ Low Frequency	32Hz～2.0kHz	4-40	table#3	
7	EQ Low Gain	-12～+12dB	52-76		
8	EQ High Frequency	500Hz～16.0kHz	28-58	table#3	
9	EQ High Gain	-12～+12dB	52-76		
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	
11	Drive (*)	0～127	0-127		
12					
13					
14					
15					
16					

28 AMP SIM1, DIST HARD, DIST HARD2, DIST SOFT, DIST SOFT2 ST AMP1-6, ST DIST HARD, ST DIST SOFT

No.	Parameter	Display	Value	See Table	Control
1	Drive	0～127	0-127		●
2	AMP Type	Off,Stack,Combo,Tube	0-3		
3	LPF Cuttoff	1kHz-Thru	34-60	table#3	
4	Output Level	0～127	0-127	(table#18)	
5					
6					
7					
8					
9					
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	
11	Edge(Clip Curve)	0～127(mild～sharp)	0-127		
12					
13					
14					
15					
16					

32 AT WAH+DST1/2, AT WAH+OD1/2

No.	Parameter	Display	Value	See Table	Control
1	LFO Frequency	0.00Hz～39.7Hz	0-127	table#1	
2	LFO Depth	0～127	0-127	(table#19)	
3	Cutoff Frequency Offset	0～127	0-127		●
4	Resonance	1.0～12.0	10-120		
5					
6	EQ Low Frequency	32Hz～2.0kHz	4-40	table#3	
7	EQ Low Gain	-12～+12dB	52-76		
8	EQ High Frequency	500Hz～16.0kHz	28-58	table#3	
9	EQ High Gain	-12～+12dB	52-76		
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	
11	Drive	0～127	0-127		
12	EQ Low Gain(distortion)	-12～+12dB	52-76		
13	EQ Mid Gain(distortion)	-12～+12dB	52-76		
14	LPF Cutoff	1.0kHz～Thru	34-60	table#3	
15	Output Level	0～127	0-127	(table#18)	
16					

PITCH CHG1/2

35

No.	Parameter	Display	Value	See Table	Control
1	Pitch	-24～+24	40-88		
2	Initial Delay	0.1mS～198.5mS	0-63	table#7	
3	Fine 1	-50～+50	14-114		
4	Fine 2	-50～+50	14-114		
5	Feedback Level	-63～+63	1-127		
6					
7					
8					
9					
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	●
11	Pan 1	L63～R63	1-127		
12	Output Level 1	0～127	0-127	(table#18)	
13	Pan 2	L63～R63	1-127		
14	Output Level 2	0～127	0-127	(table#18)	
15					
16					

PITCH CHG3

36

No.	Parameter	Display	Value	See Table	Control
1	Pitch	-24～+24	40-88		
2	Initial Delay	0.1mS～198.5mS	0-63	table#7	
3	Fine 1	-50～+50cent	14-114		
4	Fine 2	-50～+50cent	14-114		
5	Feedback Level	-63～+63	1-127		
6					
7					
8					
9					
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	●
11	Pan 1	L63～R63	1-127		
12	Output Level 1	0～127	0-127	(table#18)	
13	Pan 2	L63～R63	1-127		
14	Output Level 2	0～127	0-127	(table#18)	
15					
16					

HM ENHANCER1/2

37

No.	Parameter	Display	Value	See Table	Control
1	HPF Cutoff	500Hz～16.0kHz	28-58		
2	Drive	0～127	0-127		
3	Mix Level	0～127	0-127		
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

TOUCH WAH 1

38

No.	Parameter	Display	Value	See Table	Control
1	Sensitivity	0～127	0-127		
2	Cutoff Frequency Offset	0～127	0-127		●
3	Resonance	1.0～12.0	10-120		
4					
5					
6	EQ Low Frequency	32Hz～2.0kHz	4-40	table#3	
7	EQ Low Gain	-12～+12dB	52-76		
8	EQ High Frequency	500Hz～16.0kHz	28-58	table#3	
9	EQ High Gain	-12～+12dB	52-76		
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	
11	Drive (*)	0～127	0-127		
12					
13					
14					
15					
16					

TC WAH+DIST1/2

39

No.	Parameter	Display	Value	See Table	Control
1	Sensitivoty	0～127	0-127		
2	Cutoff Frequency Offset	0～127	0-127		●
3	Resonance	1.0～12.0	10-120		
4					
5					
6	EQ Low Frequency	32Hz～2.0kHz	4-40	table#3	
7	EQ Low Gain	-12～+12dB	52-76		
8	EQ High Frequency	500Hz～16.0kHz	28-58	table#3	
9	EQ High Gain	-12～+12dB	52-76		
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	
11	Drive	0～127	0-127		
12					
13					
14					
15					
16					

TC WAH+OD1/2

40

No.	Parameter	Display	Value	See Table	Control
1	Sensitivity	0～127	0-127		
2	Cutoff Frequency Offset	0～127	0-127		●
3	Resonance	1.0～12.0	10-120		
4					
5					
6	EQ Low Frequency	32Hz～2.0kHz	4-40	table#3	
7	EQ Low Gain	-12～+12dB	52-76		
8	EQ High Frequency	500Hz～16.0kHz	28-58	table#3	
9	EQ High Gain	-12～+12dB	52-76		
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	
11	Drive	0～127	0-127		
12	EQ Low Gain (distortion)	-12～+12dB	52-76		
13	EQ Mid Gain (distortion)	-12～+12dB	52-76		
14	LPF Cutoff	1.0kHz～Thru	34-60	table#3	
15	Output Level	0～127	0-127	(table#18)	
16	Release	10～680mS	52-67	table#12	

TOUCH WAH2, CLAVI TC WAH, EP TC WAH

41

No.	Parameter	Display	Value	See Table	Control
1	Sensitivity	0～127	0-127		
2	Cutoff Frequency Offset	0～127	0-127		●
3	Resonance	1.0～12.0	10-120		
4					
5					
6	EQ Low Frequency	32Hz～2.0kHz	4-40	table#3	
7	EQ Low Gain	-12～+12dB	52-76		
8	EQ High Frequency	500Hz～16.0kHz	28-58	table#3	
9	EQ High Gain	-12～+12dB	52-76		
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	
11	Drive (*)	0～127	0-127		
12	EQ Low Gain (*) (distortion)	-12～+12dB	52-76		
13	EQ Mid Gain (*) (distortion)	-12～+12dB	52-76		
14	LPF Cutoff (*)	1.0kHz～Thru	34-60	table#3	
15	Output Level (*)	0～127	0-127	(table#18)	
16	Release	10～680mS	52-67	table#12	

COMPRESSOR

42

No.	Parameter	Display	Value	See Table	Control
1	Attack	1～40ms	0-19	table#8	
2	Release	10～680ms	0-15	table#9	
3	Threshold	-48～-6dB	79-121		
4	Ratio	1.0～20.0	0-7	table#10	
5	Output Level	0～127	0-127	(table#18)	
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

NOISE GATE

43

No.	Parameter	Display	Value	See Table	Control
1	Attack	1～40ms	0-19	table#8	
2	Release	10～680ms	0-15	table#9	
3	Threshold	-72～-30dB	55-97		
4	Output Level	0～127	0-127	(table#18)	
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

AMP+2ROT SP

47

No.	Parameter	Display	Value	See Table	Control
1	Rotor Speed	0.0-39.7Hz	0-127	table#1	●
2	Drive Low	0-127	0-127		
3	Drive High	0-127	0-127		
4	Low/High Balance	L63>H - L=H - L<H=63	1-127		
5					
6	EQ Low Frequency	32-2.0kHz	4-40	table#3	
7	EQ Low Gain	-12 - +12dB	52-76		
8	EQ High Frequency	500 - 16.0kHz	28-58	table#3	
9	EQ High Gain	-12 - +12dB	52-76		
10					
11	Crossover Frequency	100 - 10.0kHz	14-54	table#3	
12	Mic L-R Angle	0 - 180deg	0-60		
13	AMP Type	Off,Stack,Combo,Tube(AMPSIM only)	0-3		
14	Drive	0～127	0-127		
15	LPF Cuttoff	1kHz-Thru	34-60		
16	Output Level	0～127	0-127	(table#18)	

VCE CANCEL

44

No.	Parameter	Display	Value	See Table	Control
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11	Low Adjust	0～26	0-26		
12	High Adjust	0～26	0-26		
13					
14					
15					
16					

ENS DETUNE

48

No.	Parameter	Display	Value	See Table	Control
1	Detune	-50～+50cent	14-114		
2	Lch Init Delay	0.0mS～50mS	0-127	table#2	
3	Rch Init Delay	0.0mS～50mS	0-127	table#2	
4					
5					
6					
7					
8					
9					
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	●
11	EQ Low Frequency	32Hz～2.0kHz	4-40	table#3	
12	EQ Low Gain	-12～+12dB	52-76		
13	EQ High Frequency	500Hz～16.0kHz	28-58	table#3	
14	EQ High Gain	-12～+12dB	52-76		
15					
16					

2WAY ROT SP

45

No.	Parameter	Display	Value	See Table	Control
1	Rotor Speed	0.0Hz～39.7Hz	0-127	table#1	●
2	Drive Low	0～127	0-127		
3	Drive High	0～127	0-127		
4	Low/High	L63>H ～ L=H ～ L<H63	1-127		
5					
6	EQ Low Frequency	32Hz～2.0kHz	4-40	table#3	
7	EQ Low Gain	-12～+12dB	52-76		
8	EQ High Frequency	500Hz～16.0kHz	28-58	table#3	
9	EQ High Gain	-12～+12dB	52-76		
10					
11	Crossover Frequency	100Hz～10.0kHz	14-54	table#3	
12	Mic L-R Angle	0deg～180deg(resolution=3deg.)	0-60		
13					
14					
15					
16					

AMBIENCE

49

No.	Parameter	Display	Value	See Table	Control
1	Delay Time	0.0mS～50mS	0-127	table#2	
2	Output Phase	normal/invers	0-1		
3					
4					
5					
6	EQ Low Frequency	32Hz～2.0kHz	4-40	table#3	
7	EQ Low Gain	-12～+12dB	52-76		
8	EQ High Frequency	500Hz～16.0kHz	28-58	table#3	
9	EQ High Gain	-12～+12dB	52-76		
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	●
11					
12					
13					
14					
15					
16					

DST+2ROT SP

OD+2ROT SP

46

No.	Parameter	Display	Value	See Table	Control
1	Rotor Speed	0.0-39.7Hz	0-127	table#1	●
2	Drive Low	0-127	0-127		
3	Drive High	0-127	0-127		
4	Low/High Balance	L63>H - L=H - L<H=63	1-127		
5					
6	EQ Low Frequency	32-2.0kHz	4-40	table#3	
7	EQ Low Gain	-12 - +12dB	52-76		
8	EQ High Frequency	500 - 16.0kHz	28-58	table#3	
9	EQ High Gain	-12 - +12dB	52-76		
10					
11	Crossover Frequency	100 - 10.0kHz	14-54	table#3	
12	Mic L-R Angle	0 - 180deg	0-60		
13					
14	Drive	0～127	0-127		
15	LPF Cuttoff	1kHz-Thru	34-60		
16	Output Level	0～127	0-127	(table#18)	

TALKING MOD

50

No.	Parameter	Display	Value	See Table	Control
1	Vowel	a,i,u,e,o	0-4		●
2	Move speed	1～62	1-62		
3	Drive	0～127	0-127		
4	Output Level	0～127	0-127	(table#18)	
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

DST+DELAY1/2, OD+DELAY1/2

51

No.	Parameter	Display	Value	See Table	Control
1	Lch Delay Time	0.1～743.0ms	1-7430		
2	Rch Delay Time	0.1～743.0ms	1-7430		
3	Delay Feedback Time	0.1～743.0ms	1-7430		
4	Delay Feedback Level	-63～+63	1-127	(table#16)	
5	Delay Mix	0～127	0-127		
6	Dist Drive	0～127	0-127		
7	Dist Output Level	0～127	0-127	(table#18)	
8	Dist EQ Low Gain	-12～+12dB	52-76		
9	Dist EQ Mid Gain	-12～+12dB	52-76		
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	●
11					
12					
13					
14					
15					
16					

CMP+DST+DLY1/2, CMP+OD+DLY1/2

52

No.	Parameter	Display	Value	See Table	Control
1	Delay Time	0.1～743.0ms	1-7430		
2	Delay Feedback Level	-63～+63	1-127	(table#16)	
3	Delay Mix	0～127	0-127		
4	Dist Drive	0～127	0-127		
5	Dist Output Level	0～127	0-127	(table#18)	
6	Dist EQ Low Gain	-12～+12dB	52-76		
7	Dist EQ Mid Gain	-12～+12dB	52-76		
8					
9					
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	●
11	Comp. Attack	1ms～40ms	0-19	table#8	
12	Comp. Release	10ms～680ms	0-15	table#9	
13	Comp. Threshold	-48dB～-6dB	79-121		
14	Comp. Ratio	1.0～20.0	0-7	table#10	
15					
16					

WH+DST+DLY1/2, WH+OD+DLY1/2

53

No.	Parameter	Display	Value	See Table	Control
1	Delay Time	0.1～743.0ms	1-7430		
2	Delay Feedback Level	-63～+63	1-127	(table#16)	
3	Delay Mix	0～127	0-127		
4	Dist Drive	0～127	0-127		
5	Dist Output Level	0～127	0-127	(table#18)	
6	Dist EQ Low Gain	-12～+12dB	52-76		
7	Dist EQ Mid Gain	-12～+12dB	52-76		
8					
9					
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1-127	(table#15)	●
11	Wah Sensitivity	0～127	0-127		
12	Wah Cutoff Freq Offset	0～127	0-127		
13	Wah Resonance	1.0～12.0	10-120		
14	Wah Release	10～680ms	52-67	table#12	
15					
16					

V_DIST HARD
V_DIST SOFT

54

No.	Parameter	Display	Value	See Table	Control
1	Overdrive	0-100%	0-100		
2	Device	Transistor/Vintage Tube/ Dist1/Dist2/Fuzz	0-4		
3	Speaker	Flat/Stack/Combo/Twin/ Radio/Megaphone	0-5		
4	Presence	0-20	0-20		
5	Output Level	0-100%	0-100		
6					
7					
8					
9					
10	Dry/Wet Balance	D63>W-D=W-D<W63	1-127	(table#15)	●
11					
12					
13					
14					
15					
16					

V DST H+DLY
V_DST S+DLY

55

No.	Parameter	Display	Value	See Table	Control
1	Overdrive	0-100%	0-100		
2	Device	Transistor/Vintage Tube/ Dist1/Dist2/Fuzz	0-4		
3	Speaker	Flat/Stack/Combo/Twin/ Radio/Megaphone	0-5		
4	Presence	0-20	0-20		
5	Output Level	0-100%	0-100		
6	Delay Time L	0.1～743.0ms	1-7430		
7	Delay Time R	0.1～743.0ms	1-7430		
8	Delay Feedback Time	0.1～743.0ms	1-7430		
9	Delay Feedback Level	-63～+63	1-127	(table#16)	
10	Dry/Wet Balance	D63>W-D=W-D<W63	1-127	(table#15)	●
11	Delay Mix	0-127	0-127		
12	Feedback High Dump	0.1～1.0	1-10		
13					
14					
15					
16					

DUAL ROT SP1/2

56

No.	Parameter	Display	Value	See Table	Control
1	Rotor Speed Slow	0.0-2.65Hz	0-63	table#1	
2	Horn Speed Slow	0.0-2.65Hz	0-63	table#1	
3	Rotor Speed Fast	2.69-39.7Hz	64-127	table#1	
4	Horn Speed Fast	2.69-39.7Hz	64-127	table#1	
5	Slow-Fast Time of R	0～127	0-127		
6	Slow-Fast Time of H	0～127	0-127		
7	Drive Low	0～127	0-127		
8	Drive High	0～127	0-127		
9	Low/High Balance	L63>H - L=H - L<H=63	1-127		
10					
11	EQ Low Frequency	32-2.0kH	4-40	table#3	
12	EQ Low Gain	-12 - +12dB	52-76		
13	EQ High Frequency	500 - 16.0kHz	28-58	table#3	
14	EQ High Gain	-12 - +12dB	52-76		
15	Mic L-R Angle	0 - 180deg	0-60		
16	Speed Control	Slow/Fast	0-1		●

DST+TDLY, OD+TDLY

57

No.	Parameter	Display	Value	See Table	Control
1	Delay Time	64th/3 - 4thx6	0-19	table#14	
2	Delay Feedback Level	-63 - +63	1-127	(table#16)	
3	Delay Mix	0 - 127	0-127		
4	Dist Drive	0 - 127	0-127		
5	Dist Output Level	0 - 127	0-127	(table#18)	
6	Dist EQ Low Gain	-12 - +12dB	52-76		
7	Dist EQ Mid Gain	-12 - +12dB	52-76		
8	L/R Diffusion	1(-63ms)-64(0ms)-127(63ms)	1-127		
9	Lag	1(-63ms)-64(0ms)-127(63ms)	1-127		
10	Dry/Wet	D63>W - D=W - D<W=63	1-127	(table#15)	●
11					
12					
13					
14					
15					
16					

CMP+DST+TDL
CMP+OD+TDLY1/2/3/4/5/6

58

No.	Parameter	Display	Value	See Table	Control
1	Delay Time	64th/3 - 4thx6	0-19	table#14	
2	Delay Feedback Level	-63 - +63	1-127	(table#16)	
3	Delay Mix	0 - 127	0-127		
4	Dist Drive	0 - 127	0-127		
5	Dist Output Level	0 - 127	0-127	(table#18)	
6	Dist EQ Low Gain	-12 - +12dB	52-76		
7	Dist EQ Mid Gain	-12 - +12dB	52-76		
8	L/R Diffusion	1(-63ms)-64(0ms)-127(63ms)	1-127		
9	Lag	1(-63ms)-64(0ms)-127(63ms)	1-127		
10	Dry/Wet	D63>W - D=W - D<W=63	1-127	(table#15)	●
11	Comp. Attack	1ms - 40ms	0-19	table#8	
12	Comp. Release	10ms - 680ms	0-15	table#9	
13	Comp. Threshold	-48dB - -6dB	79-121		
14	Comp. Ratio	1.0 - 20.0	0-7	table#10	
15					
16					

WH+DST+TDL, WH+OD+TDLY1/2

59 No.	Parameter	Display	Value	See Table	Control
1	Delay Time	64th/3 - 4thx6	0-19	table#14	
2	Delay Feedback Level	-63 - +63	1-127	(table#16)	
3	Delay Mix	0 - 127	0-127		
4	Dist Drive	0 - 127	0-127		
5	Dist Output Level	0 - 127	0-127	(table#18)	
6	Dist EQ Low Gain	-12 - +12dB	52-76		
7	Dist EQ Mid Gain	-12 - +12dB	52-76		
8	L/R Diffusion	1(-63ms)-64(0ms)-127(63ms)	1-127		
9	Lag	1(-63ms)-64(0ms)-127(63ms)	1-127		
10	Dry/Wet	D63>W - D=W - D<W=63	1-127	(table#15)	●
11	Wah Sensitivity	0 - 127	0-127		
12	Wah Cutoff Freq Offset	0 - 127	0-127		
13	Wah Resonance	1.0 - 12.0	10-120		
14	Wah Release	10 - 680mS	52-67	table#12	
15					
16					

V_DST H+TDLY, V_DST S+TDL1/2

60 No.	Parameter	Display	Value	See Table	Control
1	Overdrive	0-100%	0-100		
2	Device	Transistor/Vintage Tube/ Dist1/Dist2/Fuzz	0-4		
3	Speaker	Flat/Stack/Combo/Twin/ Radio/Megaphone	0-5		
4	Presence	0-20	0-20		
5	Output Level	0-100%	0-100		
6	Delay Time	64th/3 - 4thx6	0-19	table#14	
7	Delay Feedback Level	-63 - +63	1-127	(table#16)	
8	L/R Diffusion	1(-63ms)-64(0ms)-127(63ms)	1-127		
9	Lag	1(-63ms)-64(0ms)-127(63ms)	1-127		
10	Dry/Wet	D63>W-D=W-D<W63	1-127	(table#15)	●
11	Delay Mix	0-127	0-127		
12	Feedback High Dump	0.1～1.0	1-10		
13					
14					
15					
16					

MBAND COMP

61 No.	Parameter	Display	Value	See Table	Control
1	Type	Normal, Low, Mid, High, Low/High, Low/Mid, Mid/High, Full Bit, Wild, Attacky, Low End, Hard, Basic	0 - 12		
2	Threshold Offset	-32 ～ +32	32 - 96		●
3	Low Gain Offset	-63 ～ +63	1 - 127		
4	Mid Gain Offset	-63 ～ +63	1 - 127		
5	High Gain Offset	-63 ～ +63	1 - 127		
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

T_FLANGER

62 No.	Parameter	Display	Value	See Table	Control
1	LFO Freq	16th ～ 4thx16	5 - 29	table#14	
2	LFO Depth	0 ～ 127	0 - 127	(table#19)	
3	Feedback Level	-63 ～ +63	1 - 127	(table#17)	
4	Delay Offset	0.0 ～ 50.0[ms]	0 - 127	table#2	
5	LFO Phase Reset	Off(free run),KeyOnReset, SEQ Start Reset	0 - 2 (*)		
6	EQ Low Frequency	32[Hz] ～ 2.0[kHz]	4 - 40	table#3	
7	EQ Low Gain	-12 ～ +12[dB]	52 - 76		
8	EQ High Frequency	500[Hz] ～ 16.0[kHz]	28 - 58	table#3	
9	EQ High Gain	-12 ～ +12[dB]	52 - 76		
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1 - 127	(table#15)	●
11	EQ mid frequency	100[Hz] ～ 10.0[kHz]	14 - 54	table#3	
12	EQ mid gain	-12 ～ +12[dB]	52 - 76		
13	EQ mid width	0.1 ～ 12.0	1 - 120		
14	LFO phase difference	-180 ～ +180[deg]	4 - 124		
15					
16					

T_PHASER MSB = 108

63 No.	Parameter	Display	Value	See Table	Control
1	LFO Freq	16th ～ 4thx16	5 - 29	table#14	
2	LFO Depth	0 ～ 127	0 - 127	(table#19)	
3	Phase Shift Offset	0 ～ 127	0 - 127		
4	Feedback Level	-63 ～ +63	1 - 127	(table#16)	
5	LFO Phase Reset	Off(free run),KeyOnReset, SEQ Start Reset	0 - 2		
6	EQ Low Frequency	32[Hz] ～ 2.0[kHz]	4 - 40	table#3	
7	EQ Low Gain	-12 ～ +12[dB]	52 - 76		
8	EQ High Frequency	500[Hz] ～ 16.0[kHz]	28 - 58	table#3	
9	EQ High Gain	-12 ～ +12[dB]	52 - 76		
10	Dry/Wet	D63>W ～ D=W ～ D<W63	1 - 127	(table#15)	●
11	Stage	3～11	3 - 11		
12					
13	LFO phase difference	-180 ～ +180[deg]	4 - 124		
14					
15					
16					

ISOLATOR

64 No.	Parameter	Display	Value	See Table	Control
1	On/off SW	Off, On	0 - 1		●
2	Low Level	0 ～ 127	0 - 127		
3	Mid Level	0 ～ 127	0 - 127		
4	High Level	0 ～ 127	0 - 127		
5	Low Mute	Off, On	0 - 1		
6	Mid Mute	Off, On	0 - 1		
7	High Mute	Off, On	0 - 1		
8					
9					
10					
11					
12					
13					
14					
15					
16					

NO EFFECT

No.	Parameter	Display	Value	See Table	Control
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

THRU

No.	Parameter	Display	Value	See Table	Control
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

Effect Data Assign Table

table#1
LFO Frequency

Data	Value	Data	Value
0	0.00	64	2.69
1	0.04	65	2.78
2	0.08	66	2.86
3	0.13	67	2.94
4	0.17	68	3.03
5	0.21	69	3.11
6	0.25	70	3.20
7	0.29	71	3.28
8	0.34	72	3.37
9	0.38	73	3.45
10	0.42	74	3.53
11	0.46	75	3.62
12	0.51	76	3.70
13	0.55	77	3.87
14	0.59	78	4.04
15	0.63	79	4.21
16	0.67	80	4.37
17	0.72	81	4.54
18	0.76	82	4.71
19	0.80	83	4.88
20	0.84	84	5.05
21	0.88	85	5.22
22	0.93	86	5.38
23	0.97	87	5.55
24	1.01	88	5.72
25	1.05	89	6.06
26	1.09	90	6.39
27	1.14	91	6.73
28	1.18	92	7.07
29	1.22	93	7.40
30	1.26	94	7.74
31	1.30	95	8.08
32	1.35	96	8.41
33	1.39	97	8.75
34	1.43	98	9.08
35	1.47	99	9.42
36	1.51	100	9.76
37	1.56	101	10.1
38	1.60	102	10.8
39	1.64	103	11.4
40	1.68	104	12.1
41	1.72	105	12.8
42	1.77	106	13.5
43	1.81	107	14.1
44	1.85	108	14.8
45	1.89	109	15.5
46	1.94	110	16.2
47	1.98	111	16.8
48	2.02	112	17.5
49	2.06	113	18.2
50	2.10	114	19.5
51	2.15	115	20.9
52	2.19	116	22.2
53	2.23	117	23.6
54	2.27	118	24.9
55	2.31	119	26.2
56	2.36	120	27.6
57	2.40	121	28.9
58	2.44	122	30.3
59	2.48	123	31.6
60	2.52	124	33.0
61	2.57	125	34.3
62	2.61	126	37.0
63	2.65	127	39.7

table#2
Modulation Delay Offset

Data	Value	Data	Value
0	0.0	64	6.4
1	0.1	65	6.5
2	0.2	66	6.6
3	0.3	67	6.7
4	0.4	68	6.8
5	0.5	69	6.9
6	0.6	70	7.0
7	0.7	71	7.1
8	0.8	72	7.2
9	0.9	73	7.3
10	1.0	74	7.4
11	1.1	75	7.5
12	1.2	76	7.6
13	1.3	77	7.7
14	1.4	78	7.8
15	1.5	79	7.9
16	1.6	80	8.0
17	1.7	81	8.1
18	1.8	82	8.2
19	1.9	83	8.3
20	2.0	84	8.4
21	2.1	85	8.5
22	2.2	86	8.6
23	2.3	87	8.7
24	2.4	88	8.8
25	2.5	89	8.9
26	2.6	90	9.0
27	2.7	91	9.1
28	2.8	92	9.2
29	2.9	93	9.3
30	3.0	94	9.4
31	3.1	95	9.5
32	3.2	96	9.6
33	3.3	97	9.7
34	3.4	98	9.8
35	3.5	99	9.9
36	3.6	100	10.0
37	3.7	101	11.1
38	3.8	102	12.2
39	3.9	103	13.3
40	4.0	104	14.4
41	4.1	105	15.5
42	4.2	106	17.1
43	4.3	107	18.6
44	4.4	108	20.2
45	4.5	109	21.8
46	4.6	110	23.3
47	4.7	111	24.9
48	4.8	112	26.5
49	4.9	113	28.0
50	5.0	114	29.6
51	5.1	115	31.2
52	5.2	116	32.8
53	5.3	117	34.3
54	5.4	118	35.9
55	5.5	119	37.5
56	5.6	120	39.0
57	5.7	121	40.6
58	5.8	122	42.2
59	5.9	123	43.7
60	6.0	124	45.3
61	6.1	125	46.9
62	6.2	126	48.4
63	6.3	127	50.0

table#3
EQ Frequency

Data	Value
0	THRU(20)
1	22
2	25
3	28
4	32
5	36
6	40
7	45
8	50
9	56
10	63
11	70
12	80
13	90
14	100
15	110
16	125
17	140
18	160
19	180
20	200
21	225
22	250
23	280
24	315
25	355
26	400
27	450
28	500
29	560
30	630
31	700
32	800
33	900
34	1.0k
35	1.1k
36	1.2k
37	1.4k
38	1.6k
39	1.8k
40	2.0k
41	2.2k
42	2.5k
43	2.8k
44	3.2k
45	3.6k
46	4.0k
47	4.5k
48	5.0k
49	5.6k
50	6.3k
51	7.0k
52	8.0k
53	9.0k
54	10.0k
55	11.0k
56	12.0k
57	14.0k
58	16.0k
59	18.0k
60	THRU(20.0k)

table#4
Reverb time

Data	Value	Data	Value
0	0.3	64	17.0
1	0.4	65	18.0
2	0.5	66	19.0
3	0.6	67	20.0
4	0.7	68	25.0
5	0.8	69	30.0
6	0.9		
7	1.0		
8	1.1		
9	1.2		
10	1.3		
11	1.4		
12	1.5		
13	1.6		
14	1.7		
15	1.8		
16	1.9		
17	2.0		
18	2.1		
19	2.2		
20	2.3		
21	2.4		
22	2.5		
23	2.6		
24	2.7		
25	2.8		
26	2.9		
27	3.0		
28	3.1		
29	3.2		
30	3.3		
31	3.4		
32	3.5		
33	3.6		
34	3.7		
35	3.8		
36	3.9		
37	4.0		
38	4.1		
39	4.2		
40	4.3		
41	4.4		
42	4.5		
43	4.6		
44	4.7		
45	4.8		
46	4.9		
47	5.0		
48	5.5		
49	6.0		
50	6.5		
51	7.0		
52	7.5		
53	8.0		
54	8.5		
55	9.0		
56	9.5		
57	10.0		
58	11.0		
59	12.0		
60	13.0		
61	14.0		
62	15.0		
63	16.0		

table#5
Delay Time(0.1～200.0[ms])

Data	Value	Data	Value
0	0.1	64	100.8
1	1.7	65	102.4
2	3.2	66	104.0
3	4.8	67	105.6
4	6.4	68	107.1
5	8.0	69	108.7
6	9.5	70	110.3
7	11.1	71	111.9
8	12.7	72	113.4
9	14.3	73	115.0
10	15.8	74	116.6
11	17.4	75	118.2
12	19.0	76	119.7
13	20.6	77	121.3
14	22.1	78	122.9
15	23.7	79	124.4
16	25.3	80	126.0
17	26.9	81	127.6
18	28.4	82	129.2
19	30.0	83	130.7
20	31.6	84	132.3
21	33.2	85	133.9
22	34.7	86	135.5
23	36.3	87	137.0
24	37.9	88	138.6
25	39.5	89	140.2
26	41.0	90	141.8
27	42.6	91	143.3
28	44.2	92	144.9
29	45.7	93	146.5
30	47.3	94	148.1
31	48.9	95	149.6
32	50.5	96	151.2
33	52.0	97	152.8
34	53.6	98	154.4
35	55.2	99	155.9
36	56.8	100	157.5
37	58.3	101	159.1
38	59.9	102	160.6
39	61.5	103	162.2
40	63.1	104	163.8
41	64.6	105	165.4
42	66.2	106	166.9
43	67.8	107	168.5
44	69.4	108	170.1
45	70.9	109	171.7
46	72.5	110	173.2
47	74.1	111	174.8
48	75.7	112	176.4
49	77.2	113	178.0
50	78.8	114	179.5
51	80.4	115	181.1
52	81.9	116	182.7
53	83.5	117	184.3
54	85.1	118	185.8
55	86.7	119	187.4
56	88.2	120	189.0
57	89.8	121	190.6
58	91.4	122	192.1
59	93.0	123	193.7
60	94.5	124	195.3
61	96.1	125	196.9
62	97.7	126	198.4
63	99.3	127	200.0

table#6
Room Size

Data	Value	Data	Value
0	0.1	64	10.1
1	0.3	65	10.3
2	0.4	66	10.4
3	0.6	67	10.6
4	0.7	68	10.8
5	0.9	69	10.9
6	1.0	70	11.1
7	1.2	71	11.2
8	1.4	72	11.4
9	1.5	73	11.5
10	1.7	74	11.7
11	1.8	75	11.9
12	2.0	76	12.0
13	2.1	77	12.2
14	2.3	78	12.3
15	2.5	79	12.5
16	2.6	80	12.6
17	2.8	81	12.8
18	2.9	82	12.9
19	3.1	83	13.1
20	3.2	84	13.3
21	3.4	85	13.4
22	3.5	86	13.6
23	3.7	87	13.7
24	3.9	88	13.9
25	4.0	89	14.0
26	4.2	90	14.2
27	4.3	91	14.4
28	4.5	92	14.5
29	4.6	93	14.7
30	4.8	94	14.8
31	5.0	95	15.0
32	5.1	96	15.1
33	5.3	97	15.3
34	5.4	98	15.5
35	5.6	99	15.6
36	5.7	100	15.8
37	5.9	101	15.9
38	6.1	102	16.1
39	6.2	103	16.2
40	6.4	104	16.4
41	6.5	105	16.6
42	6.7	106	16.7
43	6.8	107	16.9
44	7.0	108	17.0
45	7.2	109	17.2
46	7.3	110	17.3
47	7.5	111	17.5
48	7.6	112	17.6
49	7.8	113	17.8
50	7.9	114	18.0
51	8.1	115	18.1
52	8.2	116	18.3
53	8.4	117	18.4
54	8.6	118	18.6
55	8.7	119	18.7
56	8.9	120	18.9
57	9.0	121	19.1
58	9.2	122	19.2
59	9.3	123	19.4
60	9.5	124	19.5
61	9.7	125	19.7
62	9.8	126	19.8
63	10.0	127	20.0

table#7
Delay Time(0.1～400.0[ms])

Data	Value	Data	Value
0	0.1	64	201.6
1	3.2	65	204.8
2	6.4	66	207.9
3	9.5	67	211.1
4	12.7	68	214.2
5	15.8	69	217.4
6	19.0	70	220.5
7	22.1	71	223.7
8	25.3	72	226.8
9	28.4	73	230.0
10	31.6	74	233.1
11	34.7	75	236.3
12	37.9	76	239.4
13	41.0	77	242.6
14	44.2	78	245.7
15	47.3	79	248.9
16	50.5	80	252.0
17	53.6	81	255.2
18	56.8	82	258.3
19	59.9	83	261.5
20	63.1	84	264.6
21	66.2	85	267.7
22	69.4	86	270.9
23	72.5	87	274.0
24	75.7	88	277.2
25	78.8	89	280.3
26	82.0	90	283.5
27	85.1	91	286.6
28	88.3	92	289.8
29	91.4	93	292.9
30	94.6	94	296.1
31	97.7	95	299.2
32	100.9	96	302.4
33	104.0	97	305.5
34	107.2	98	308.7
35	110.3	99	311.8
36	113.5	100	315.0
37	116.6	101	318.1
38	119.8	102	321.3
39	122.9	103	324.4
40	126.1	104	327.6
41	129.2	105	330.7
42	132.4	106	333.9
43	135.5	107	337.0
44	138.6	108	340.2
45	141.8	109	343.3
46	144.9	110	346.5
47	148.1	111	349.6
48	151.2	112	352.8
49	154.4	113	355.9
50	157.5	114	359.1
51	160.7	115	362.2
52	163.8	116	365.4
53	167.0	117	368.5
54	170.1	118	371.7
55	173.3	119	374.8
56	176.4	120	378.0
57	179.6	121	381.1
58	182.7	122	384.3
59	185.9	123	387.4
60	189.0	124	390.6
61	192.2	125	393.7
62	195.3	126	396.9
63	198.5	127	400.0

table#8
Compressor Attack Time

Data	Value
0	1
1	2
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10
10	12
11	14
12	16
13	18
14	20
15	23
16	26
17	30
18	35
19	40

table#9
Compressor
Release Time

Data	Value
0	10
1	15
2	25
3	35
4	45
5	55
6	65
7	75
8	85
9	100
10	115
11	140
12	170
13	230
14	340
15	680

table#10
Compressor Ratio

Data	Value
0	1.0
1	1.5
2	2.0
3	3.0
4	5.0
5	7.0
6	10.0
7	20.0

table#11
Reverb Width;Depth;Height

Data	Value	Data	Value
0	0.5	64	17.6
1	0.8	65	17.9
2	1.0	66	18.2
3	1.3	67	18.5
4	1.5	68	18.8
5	1.8	69	19.1
6	2.0	70	19.4
7	2.3	71	19.7
8	2.6	72	20.0
9	2.8	73	20.2
10	3.1	74	20.5
11	3.3	75	20.8
12	3.6	76	21.1
13	3.9	77	21.4
14	4.1	78	21.7
15	4.4	79	22.0
16	4.6	80	22.4
17	4.9	81	22.7
18	5.2	82	23.0
19	5.4	83	23.3
20	5.7	84	23.6
21	5.9	85	23.9
22	6.2	86	24.2
23	6.5	87	24.5
24	6.7	88	24.9
25	7.0	89	25.2
26	7.2	90	25.5
27	7.5	91	25.8
28	7.8	92	26.1
29	8.0	93	26.5
30	8.3	94	26.8
31	8.6	95	27.1
32	8.8	96	27.5
33	9.1	97	27.8
34	9.4	98	28.1
35	9.6	99	28.5
36	9.9	100	28.8
37	10.2	101	29.2
38	10.4	102	29.5
39	10.7	103	29.9
40	11.0	104	30.2
41	11.2		
42	11.5		
43	11.8		
44	12.1		
45	12.3		
46	12.6		
47	12.9		
48	13.1		
49	13.4		
50	13.7		
51	14.0		
52	14.2		
53	14.5		
54	14.8		
55	15.1		
56	15.4		
57	15.6		
58	15.9		
59	16.2		
60	16.5		
61	16.8		
62	17.1		
63	17.3		

table#12
Wah Release Time

Data	Value
52	10
53	15
54	25
55	35
56	45
57	55
58	65
59	75
60	85
61	100
62	115
63	140
64	170
65	230
66	340
67	680

table#13
LO-FI Sampling Frequency Control

Data	Value	Data	Value
0	44.1k	64	678.0
1	22.1k	65	668.0
2	14.7k	66	658.0
3	11.0k	67	649.0
4	8.8k	68	639.0
5	7.4k	69	630.0
6	6.3k	70	621.0
7	5.5k	71	613.0
8	4.9k	72	604.0
9	4.4k	73	596.0
10	4.0k	74	588.0
11	3.7k	75	580.0
12	3.4k	76	573.0
13	3.2k	77	565.0
14	2.9k	78	558.0
15	2.8k	79	551.0
16	2.6k	80	544.0
17	2.5k	81	538.0
18	2.3k	82	531.0
19	2.2k	83	525.0
20	2.1k	84	519.0
21	2.0k	85	513.0
22	1.92k	86	507.0
23	1.84k	87	501.0
24	1.76k	88	496.0
25	1.70k	89	490.0
26	1.63k	90	485.0
27	1.58k	91	479.0
28	1.52k	92	474.0
29	1.47k	93	469.0
30	1.42k	94	464.0
31	1.38k	95	459.0
32	1.34k	96	455.0
33	1.30k	97	450.0
34	1.26k	98	445.0
35	1.23k	99	441.0
36	1.19k	100	437.0
37	1.16k	101	432.0
38	1.13k	102	428.0
39	1.10k	103	424.0
40	1.08k	104	420.0
41	1.05k	105	416.0
42	1.03k	106	412.0
43	1.00k	107	408.0
44	980.0	108	405.0
45	959.0	109	401.0
46	938.0	110	397.0
47	919.0	111	394.0
48	900.0	112	390.0
49	882.0	113	387.0
50	865.0	114	383.0
51	848.0	115	380.0
52	832.0	116	377.0
53	817.0	117	374.0
54	802.0	118	371.0
55	788.0	119	368.0
56	774.0	120	364.0
57	760.0	121	361.0
58	747.0	122	359.0
59	735.0	123	356.0
60	723.0	124	353.0
61	711.0	125	350.0
62	700.0	126	347.0
63	689.0	127	345.0

table#14

Tempo

Data	Value	Data	Value
0	64th/3	64	4thX51
1	64th.	65	4thX52
2	32th	66	4thX53
3	32th/3	67	4thX54
4	32th.	68	4thX55
5	16th	69	4thX56
6	16th/3	70	4thX57
7	16th.	71	4thX58
8	8th	72	4thX59
9	8th/3	73	4thX60
10	8th.	74	4thX61
11	4th	75	4thX62
12	4th/3	76	4thX63
13	4th.	77	4thX64
14	2nd		
15	2nd/3		
16	2nd.		
17	4thX4		
18	4thX5		
19	4thX6		
20	4thX7		
21	4thX8		
22	4thX9		
23	4thX10		
24	4thX11		
25	4thX12		
26	4thX13		
27	4thX14		
28	4thX15		
29	4thX16		
30	4thX17		
31	4thX18		
32	4thX19		
33	4thX20		
34	4thX21		
35	4thX22		
36	4thX23		
37	4thX24		
38	4thX25		
39	4thX26		
40	4thX27		
41	4thX28		
42	4thX29		
43	4thX30		
44	4thX31		
45	4thX32		
46	4thX33		
47	4thX34		
48	4thX35		
49	4thX36		
50	4thX37		
51	4thX38		
52	4thX39		
53	4thX40		
54	4thX41		
55	4thX42		
56	4thX43		
57	4thX44		
58	4thX45		
59	4thX46		
60	4thX47		
61	4thX48		
62	4thX49		
63	4thX50		

table#15

Dry/Wet

Data	Dry(dB)	Wet(dB)	Data	Dry(dB)	Wet(dB)
1	0.00	-∞	65	-0.28	0.00
2	0.00	-71.97	66	-0.56	0.00
3	0.00	-59.93	67	-0.85	0.00
4	0.00	-52.89	68	-1.14	0.00
5	0.00	-47.89	69	-1.44	0.00
6	0.00	-44.01	70	-1.74	0.00
7	0.00	-40.85	71	-2.05	0.00
8	0.00	-38.17	72	-2.36	0.00
9	0.00	-35.85	73	-2.68	0.00
10	0.00	-33.80	74	-3.00	0.00
11	0.00	-31.97	75	-3.33	0.00
12	0.00	-30.32	76	-3.67	0.00
13	0.00	-28.81	77	-4.01	0.00
14	0.00	-27.42	78	-4.37	0.00
15	0.00	-26.13	79	-4.72	0.00
16	0.00	-24.93	80	-5.09	0.00
17	0.00	-23.81	81	-5.46	0.00
18	0.00	-22.76	82	-5.85	0.00
19	0.00	-21.76	83	-6.24	0.00
20	0.00	-20.82	84	-6.63	0.00
21	0.00	-19.93	85	-7.04	0.00
22	0.00	-19.08	86	-7.46	0.00
23	0.00	-18.28	87	-7.89	0.00
24	0.00	-17.50	88	-8.33	0.00
25	0.00	-16.77	89	-8.78	0.00
26	0.00	-16.06	90	-9.25	0.00
27	0.00	-15.37	91	-9.72	0.00
28	0.00	-14.72	92	-10.21	0.00
29	0.00	-14.09	93	-10.71	0.00
30	0.00	-13.48	94	-11.23	0.00
31	0.00	-12.89	95	-11.77	0.00
32	0.00	-12.32	96	-12.32	0.00
33	0.00	-11.77	97	-12.89	0.00
34	0.00	-11.23	98	-13.48	0.00
35	0.00	-10.71	99	-14.09	0.00
36	0.00	-10.21	100	-14.72	0.00
37	0.00	-9.72	101	-15.37	0.00
38	0.00	-9.25	102	-16.06	0.00
39	0.00	-8.78	103	-16.77	0.00
40	0.00	-8.33	104	-17.50	0.00
41	0.00	-7.89	105	-18.28	0.00
42	0.00	-7.46	106	-19.08	0.00
43	0.00	-7.04	107	-19.93	0.00
44	0.00	-6.63	108	-20.82	0.00
45	0.00	-6.24	109	-21.76	0.00
46	0.00	-5.85	110	-22.76	0.00
47	0.00	-5.46	111	-23.81	0.00
48	0.00	-5.09	112	-24.93	0.00
49	0.00	-4.72	113	-26.13	0.00
50	0.00	-4.37	114	-27.42	0.00
51	0.00	-4.01	115	-28.81	0.00
52	0.00	-3.67	116	-30.32	0.00
53	0.00	-3.33	117	-31.97	0.00
54	0.00	-3.00	118	-33.80	0.00
55	0.00	-2.68	119	-35.85	0.00
56	0.00	-2.36	120	-38.17	0.00
57	0.00	-2.05	121	-40.85	0.00
58	0.00	-1.74	122	-44.01	0.00
59	0.00	-1.44	123	-47.89	0.00
60	0.00	-1.14	124	-52.89	0.00
61	0.00	-0.85	125	-59.93	0.00
62	0.00	-0.56	126	-71.97	0.00
63	0.00	-0.28	127	-∞	0.00
64	0.00	0.00			

table#16

Feedback Level (Reverb, Delay, Flange)

Data	Value(%)	Data	Value(%)
1	-99.2065	65	1.57471
2	-97.6318	66	3.14941
3	-96.0571	67	4.72412
4	-94.4824	68	6.29883
5	-92.9077	69	7.87354
6	-91.333	70	9.44824
7	-89.7583	71	11.0229
8	-88.1836	72	12.5977
9	-86.6089	73	14.1724
10	-85.0342	74	15.7471
11	-83.4595	75	17.3218
12	-81.8848	76	18.8965
13	-80.3101	77	20.4712
14	-78.7354	78	22.0459
15	-77.1606	79	23.6206
16	-75.5859	80	25.1953
17	-74.0112	81	26.77
18	-72.4365	82	28.3447
19	-70.8618	83	29.9194
20	-69.2871	84	31.4941
21	-67.7124	85	33.0688
22	-66.1377	86	34.6436
23	-64.563	87	36.2183
24	-62.9883	88	37.793
25	-61.4136	89	39.3677
26	-59.8389	90	40.9424
27	-58.2642	91	42.5171
28	-56.6895	92	44.0918
29	-55.1147	93	45.6665
30	-53.54	94	47.2412
31	-51.9653	95	48.8159
32	-50.3906	96	50.3906
33	-48.8159	97	51.9653
34	-47.2412	98	53.54
35	-45.6665	99	55.1147
36	-44.0918	100	56.6895
37	-42.5171	101	58.2642
38	-40.9424	102	59.8389
39	-39.3677	103	61.4136
40	-37.793	104	62.9883
41	-36.2183	105	64.563
42	-34.6436	106	66.1377
43	-33.0688	107	67.7124
44	-31.4941	108	69.2871
45	-29.9194	109	70.8618
46	-28.3447	110	72.4365
47	-26.77	111	74.0112
48	-25.1953	112	75.5859
49	-23.6206	113	77.1606
50	-22.0459	114	78.7354
51	-20.4712	115	80.3101
52	-18.8965	116	81.8848
53	-17.3218	117	83.4595
54	-15.7471	118	85.0342
55	-14.1724	119	86.6089
56	-12.5977	120	88.1836
57	-11.0229	121	89.7583
58	-9.44824	122	91.333
59	-7.87354	123	92.9077
60	-6.29883	124	94.4824
61	-4.72412	125	96.0571
62	-3.14941	126	97.6318
63	-1.57471	127	99.2065
64	0		

table#17
Feedback Level (Chorus)

Data	Value(%)	Data	Value(%)
1	−72.29	65	1.15
2	−71.14	66	2.29
3	−70.00	67	3.44
4	−68.85	68	4.59
5	−67.70	69	5.74
6	−66.55	70	6.88
7	−65.41	71	8.03
8	−64.26	72	9.18
9	−63.11	73	10.33
10	−61.96	74	11.47
11	−60.82	75	12.62
12	−59.67	76	13.77
13	−58.52	77	14.92
14	−57.37	78	16.06
15	−56.23	79	17.21
16	−55.08	80	18.36
17	−53.93	81	19.51
18	−52.78	82	20.65
19	−51.64	83	21.80
20	−50.49	84	22.95
21	−49.34	85	24.10
22	−48.19	86	25.24
23	−47.05	87	26.39
24	−45.90	88	27.54
25	−44.75	89	28.69
26	−43.60	90	29.83
27	−42.46	91	30.98
28	−41.31	92	32.13
29	−40.16	93	33.28
30	−39.01	94	34.42
31	−37.87	95	35.57
32	−36.72	96	36.72
33	−35.57	97	37.87
34	−34.42	98	39.01
35	−33.28	99	40.16
36	−32.13	100	41.31
37	−30.98	101	42.46
38	−29.83	102	43.60
39	−28.69	103	44.75
40	−27.54	104	45.90
41	−26.39	105	47.05
42	−25.24	106	48.19
43	−24.10	107	49.34
44	−22.95	108	50.49
45	−21.80	109	51.64
46	−20.65	110	52.78
47	−19.51	111	53.93
48	−18.36	112	55.08
49	−17.21	113	56.23
50	−16.06	114	57.37
51	−14.92	115	58.52
52	−13.77	116	59.67
53	−12.62	117	60.82
54	−11.47	118	61.96
55	−10.33	119	63.11
56	−9.18	120	64.26
57	−8.03	121	65.41
58	−6.88	122	66.55
59	−5.74	123	67.70
60	−4.59	124	68.85
61	−3.44	125	70.00
62	−2.29	126	71.14
63	−1.15	127	72.29
64	0.00		

table#18
Level

Data	dB	Data	dB
0	−∞	64	−11.90
1	−84.15	65	−11.64
2	−72.11	66	−11.37
3	−65.07	67	−11.11
4	−60.07	68	−10.85
5	−56.19	69	−10.60
6	−53.03	70	−10.35
7	−50.35	71	−10.10
8	−48.03	72	−9.86
9	−45.98	73	−9.62
10	−44.15	74	−9.38
11	−42.50	75	−9.15
12	−40.98	76	−8.92
13	−39.59	77	−8.69
14	−38.31	78	−8.47
15	−37.11	79	−8.25
16	−35.99	80	−8.03
17	−34.93	81	−7.81
18	−33.94	82	−7.60
19	−33.00	83	−7.39
20	−32.11	84	−7.18
21	−31.26	85	−6.98
22	−30.46	86	−6.77
23	−29.68	87	−6.57
24	−28.94	88	−6.37
25	−28.23	89	−6.18
26	−27.55	90	−5.98
27	−26.90	91	−5.79
28	−26.27	92	−5.60
29	−25.66	93	−5.41
30	−25.07	94	−5.23
31	−24.50	95	−5.04
32	−23.95	96	−4.86
33	−23.41	97	−4.68
34	−22.89	98	−4.50
35	−22.39	99	−4.33
36	−21.90	100	−4.15
37	−21.42	101	−3.98
38	−20.96	102	−3.81
39	−20.51	103	−3.64
40	−20.07	104	−3.47
41	−19.64	105	−3.30
42	−19.22	106	−3.14
43	−18.81	107	−2.98
44	−18.41	108	−2.82
45	−18.02	109	−2.66
46	−17.64	110	−2.50
47	−17.27	111	−2.34
48	−16.90	112	−2.18
49	−16.54	113	−2.03
50	−16.19	114	−1.88
51	−15.85	115	−1.72
52	−15.51	116	−1.57
53	−15.18	117	−1.42
54	−14.86	118	−1.28
55	−14.54	119	−1.13
56	−14.22	120	−0.98
57	−13.92	121	−0.84
58	−13.62	122	−0.70
59	−13.32	123	−0.56
60	−13.03	124	−0.42
61	−12.74	125	−0.28
62	−12.46	126	−0.14
63	−12.18	127	0.00

table#19
LFO Depth

Data	Value(%)	Data	Value(%)
0	0.00	64	50.39
1	0.78	65	51.17
2	1.56	66	51.95
3	2.34	67	52.73
4	3.13	68	53.52
5	3.91	69	54.30
6	4.69	70	55.08
7	5.47	71	55.86
8	6.25	72	56.64
9	7.03	73	57.42
10	7.81	74	58.20
11	8.59	75	58.98
12	9.38	76	59.77
13	10.16	77	60.55
14	10.94	78	61.33
15	11.72	79	62.11
16	12.50	80	62.89
17	13.28	81	63.67
18	14.06	82	64.45
19	14.84	83	65.23
20	15.63	84	66.02
21	16.41	85	66.80
22	17.19	86	67.58
23	17.97	87	68.36
24	18.75	88	69.14
25	19.53	89	69.92
26	20.31	90	70.70
27	21.09	91	71.48
28	21.88	92	72.27
29	22.66	93	73.05
30	23.44	94	73.83
31	24.22	95	74.61
32	25.20	96	75.59
33	25.98	97	76.37
34	26.76	98	77.15
35	27.54	99	77.93
36	28.32	100	78.71
37	29.10	101	79.49
38	29.88	102	80.27
39	30.66	103	81.05
40	31.45	104	81.84
41	32.23	105	82.62
42	33.01	106	83.40
43	33.79	107	84.18
44	34.57	108	84.96
45	35.35	109	85.74
46	36.13	110	86.52
47	36.91	111	87.30
48	37.70	112	88.09
49	38.48	113	88.87
50	39.26	114	89.65
51	40.04	115	90.43
52	40.82	116	91.21
53	41.60	117	91.99
54	42.38	118	92.77
55	43.16	119	93.55
56	43.95	120	94.34
57	44.73	121	95.12
58	45.51	122	95.90
59	46.29	123	96.68
60	47.07	124	97.46
61	47.85	125	98.24
62	48.63	126	99.02
63	49.41	127	100.00

table#20
Dyna Attack Time(ms)

Data	Value	Data	Value
0	0.3	64	112
1	0.9	65	114
2	1.8	66	116
3	2.7	67	118
4	3.6	68	120
5	5.4	69	121
6	7.2	70	123
7	9.0	71	125
8	10.0	72	127
9	12.0	73	129
10	14.0	74	130
11	16.0	75	132
12	18.0	76	134
13	20.0	77	136
14	21.0	78	138
15	23.0	79	140
16	25.0	80	141
17	27.0	81	143
18	29.0	82	145
19	30.0	83	147
20	32.0	84	149
21	34.0	85	150
22	36.0	86	152
23	38.0	87	154
24	40.0	88	156
25	41.0	89	158
26	43.0	90	160
27	45.0	91	161
28	47.0	92	163
29	49.0	93	165
30	50.0	94	167
31	52.0	95	169
32	54.0	96	170
33	56.0	97	172
34	58.0	98	174
35	60.0	99	176
36	61.0	100	178
37	63.0	101	180
38	65.0	102	181
39	67.0	103	183
40	69.0	104	185
41	70.0	105	187
42	72.0	106	189
43	74.0	107	190
44	76.0	108	192
45	78.0	109	194
46	80.0	110	196
47	81.0	111	198
48	83.0	112	200
49	85.0	113	201
50	87.0	114	203
51	89.0	115	205
52	90.0	116	207
53	92.0	117	209
54	94.0	118	210
55	96.0	119	212
56	98.0	120	214
57	100.0	121	216
58	101.0	122	218
59	103.0	123	220
60	105.0	124	221
61	107.0	125	223
62	109.0	126	225
63	110.0	127	227

table#21
Dyna Release Time(ms)

Data	Value	Data	Value
0	2.6	64	369.1
1	3.0	65	390.8
2	3.4	66	412.5
3	3.9	67	434.2
4	4.3	68	456.0
5	4.7	69	477.7
6	5.2	70	499.4
7	5.6	71	521.1
8	6.0	72	542.8
9	6.5	73	564.5
10	6.9	74	586.2
11	7.3	75	608.0
12	7.8	76	629.7
13	8.2	77	651.4
14	8.6	78	673.1
15	13.0	79	694.8
16	17.3	80	716.5
17	21.7	81	738.3
18	26.0	82	760.0
19	30.4	83	781.7
20	34.7	84	803.4
21	39.0	85	825.1
22	43.4	86	846.8
23	47.7	87	868.5
24	52.1	88	890.3
25	56.4	89	912.0
26	60.8	90	933.7
27	65.1	91	955.4
28	69.4	92	977.1
29	73.8	93	998.8
30	78.1	94	1020.5
31	82.5	95	1042.3
32	86.8	96	1064.0
33	91.2	97	1085.7
34	95.5	98	1107.4
35	99.8	99	1129.1
36	104.2	100	1150.8
37	108.5	101	1172.5
38	112.9	102	1194.3
39	117.2	103	1216.0
40	121.6	104	1237.7
41	125.9	105	1259.4
42	130.2	106	1281.1
43	134.6	107	1302.8
44	138.9	108	1346.3
45	143.3	109	1389.7
46	147.6	110	1433.1
47	152.0	111	1476.6
48	156.3	112	1520.0
49	160.6	113	1563.4
50	165.0	114	1606.8
51	169.3	115	1650.3
52	173.7	116	1693.7
53	178.0	117	1737.1
54	182.4	118	1780.6
55	186.7	119	1824.0
56	195.4	120	1867.4
57	217.1	121	1910.8
58	238.8	122	1954.3
59	260.5	123	1997.7
60	282.2	124	2041.1
61	304.0	125	2084.6
62	325.7	126	2128.0
63	347.4	127	2171.4

table#22
Ring Mod OSC Freq Course(Hz)

Data	Value	Data	Value
0	0.7	64	151.4
1	1.3	65	160.2
2	2.0	66	169.6
3	2.7	67	179.0
4	3.4	68	189.1
5	4.0	69	199.9
6	4.7	70	211.3
7	5.4	71	223.4
8	6.1	72	236.2
9	6.7	73	249.7
10	7.4	74	263.8
11	8.1	75	279.3
12	8.7	76	294.7
13	9.4	77	311.6
14	10.1	78	329.7
15	10.8	79	348.6
16	11.4	80	368.1
17	12.1	81	389.6
18	12.8	82	411.8
19	13.5	83	435.4
20	14.1	84	459.6
21	14.8	85	485.9
22	15.5	86	514.1
23	16.2	87	543.1
24	16.8	88	574.0
25	17.5	89	607.0
26	18.2	90	642.0
27	19.5	91	678.3
28	20.9	92	717.3
29	21.5	93	757.7
30	22.9	94	801.5
31	24.2	95	847.2
32	25.6	96	895.0
33	26.9	97	946.1
34	28.9	98	1000.7
35	30.3	99	1057.2
36	32.3	100	1117.7
37	33.6	101	1181.7
38	35.7	102	1249.0
39	37.7	103	1320.3
40	39.7	104	1395.7
41	42.4	105	1475.1
42	44.4	106	1559.2
43	47.1	107	1648.7
44	49.8	108	1742.9
45	52.5	109	1841.8
46	55.9	110	1947.5
47	59.2	111	2058.5
48	62.6	112	2175.6
49	65.9	113	2300.1
50	70.0	114	2431.3
51	73.3	115	2569.9
52	78.1	116	2716.6
53	82.1	117	2871.4
54	86.8	118	3035.6
55	92.2	119	3208.5
56	96.9	120	3391.6
57	103.0	121	3585.4
58	108.3	122	3790.0
59	115.1	123	4006.6
60	121.1	124	4234.8
61	128.5	125	4477.0
62	135.9	126	4732.1
63	143.3	127	5002.6

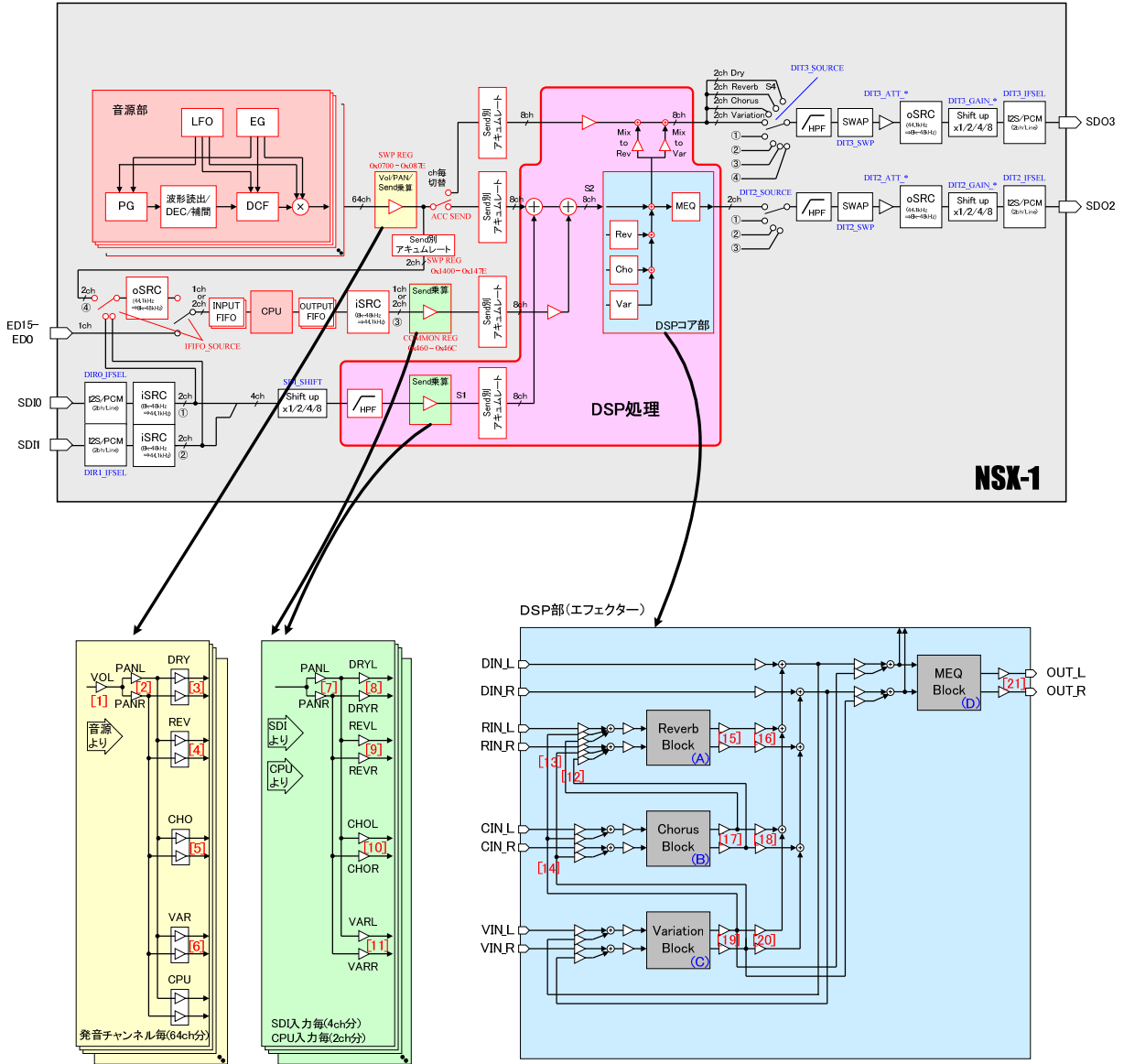
table#23
V-Flanger Delay Offset

Data	Value	Data	Value	Data	Value
0	0.1	64	4.7	128	31.4
1	0.1	65	5.0	129	31.8
2	0.1	66	5.2	130	32.3
3	0.2	67	5.5	131	32.7
4	0.2	68	5.8	132	33.1
5	0.2	69	6.0	133	33.6
6	0.2	70	6.4	134	34.0
7	0.2	71	6.7	135	34.5
8	0.3	72	7.0	136	34.9
9	0.3	73	7.4	137	35.3
10	0.3	74	7.7	138	35.8
11	0.3	75	8.1	139	36.2
12	0.4	76	8.5		
13	0.4	77	9.0		
14	0.4	78	9.4		
15	0.4	79	9.9		
16	0.4	80	10.3		
17	0.5	81	10.7		
18	0.5	82	11.2		
19	0.5	83	11.6		
20	0.5	84	12.1		
21	0.6	85	12.5		
22	0.6	86	12.9		
23	0.6	87	13.4		
24	0.7	88	13.8		
25	0.7	89	14.2		
26	0.7	90	14.7		
27	0.8	91	15.1		
28	0.8	92	15.6		
29	0.8	93	16.0		
30	0.9	94	16.4		
31	0.9	95	16.9		
32	1.0	96	17.3		
33	1.0	97	17.8		
34	1.1	98	18.2		
35	1.1	99	18.6		
36	1.2	100	19.1		
37	1.2	101	19.5		
38	1.3	102	20.0		
39	1.4	103	20.4		
40	1.4	104	20.8		
41	1.5	105	21.3		
42	1.6	106	21.7		
43	1.7	107	22.2		
44	1.8	108	22.6		
45	1.8	109	23.0		
46	1.9	110	23.5		
47	2.0	111	23.9		
48	2.1	112	24.4		
49	2.3	113	24.8		
50	2.4	114	25.2		
51	2.5	115	25.7		
52	2.6	116	26.1		
53	2.7	117	26.5		
54	2.9	118	27.0		
55	3.0	119	27.4		
56	3.2	120	27.9		
57	3.3	121	28.3		
58	3.5	122	28.7		
59	3.7	123	29.2		
60	3.9	124	29.6		
61	4.1	125	30.1		
62	4.3	126	30.5		
63	4.5	127	30.9		

table#24
Modulation Phase

Data	Value
0	−180
1	−158
2	−135
3	−113
4	−90
5	−68
6	−45
7	−23
8	0
9	23
10	45
11	68
12	90
13	113
14	135
15	158
16	180

Appendix

(1) Volume control
Pan/Volume/SendなどのMIDIメッセージで各パートの音量を制御可能です。
MIDIメッセージと対応するボリューム箇所を下図に示します。[1][2]…[21]

(2)日本語eVocaloid™Phonetic Alphabet(PA)

Kana	PA	Kana	PA	Kana	PA	Kana	PA	Kana	PA
あ	a	い	i	う	M	え	e	お	o
か	k a	き	k' i	く	k M	け	k e	こ	k o
さ	s a	し	S i	す	s M	せ	s e	そ	s o
た	t a	ち	tS i	つ	ts M	て	t e	と	t o
な	n a	に	J i	ぬ	n M	ね	n e	の	n o
は	h a	ひ	C i	ふ	p\ M	へ	h e	ほ	h o
ま	m a	み	m' i	む	m M	め	m e	も	m o
ら	4 a	り	4' i	る	4 M	れ	4 e	ろ	4 o
が	g a	ぎ	g' i	ぐ	g M	げ	g e	ご	g o
ざ	dz a	じ	dZ i	ず	dz M	ぜ	dz e	ぞ	dz o
だ	d a	ぢ	dZ i	づ	dz M	で	d e	ど	d o
ば	b a	び	b' i	ぶ	b M	べ	b e	ぼ	b o
ぱ	p a	ぴ	p' i	ぷ	p M	ぺ	p e	ぽ	p o
や	j a	ゆ	j M	よ	j o				
わ	w a	ゐ	w i	ゑ	w e	を	o		
ふぁ	p\ a	つぁ	ts a						
うぃ	w i	すぃ	s i	ずぃ	dz i	つぃ	ts i	てぃ	t' i
でぃ	d' i	ふぃ	p\' i						
とぅ	t M	どぅ	d M						
いぇ	j e	うぇ	w e	きぇ	k' e	しぇ	S e	ちぇ	tS e
つぇ	ts e	てぇ	t' e	にぇ	J e	ひぇ	C e	みぇ	m' e
りぇ	4' e	ぎぇ	g' e	じぇ	dZ e	でぇ	d' e	びぇ	b' e
ぴぇ	p' e	ふぇ	p\ e						
うぉ	w o	つぉ	ts o	ふぉ	p\ o				
きゃ	k' a	しゃ	S a	ちゃ	tS a	てゃ	t' a	にゃ	J a
ひゃ	C a	みゃ	m' a	りゃ	4' a	ぎゃ	N' a	じゃ	dZ a
でゃ	d' a	びゃ	b' a	ぴゃ	p' a	ふゃ	p\' a		
きゅ	k' M	しゅ	S M	ちゅ	tS M	てゅ	t' M	にゅ	J M
ひゅ	C M	みゅ	m' M	りゅ	4' M	ぎゅ	g' M	じゅ	dZ M
でゅ	d' M	びゅ	b' M	ぴゅ	p' M	ふゅ	p\' M		
きょ	k' o	しょ	S o	ちょ	tS o	てょ	t' o	にょ	J o
ひょ	C o	みょ	m' o	りょ	4' o	ぎょ	N' o	じょ	dZ o
でょ	d' o	びょ	b' o	ぴょ	p' o				

撥音「ん」「ン」

1. 語末ならば[N\]になります。
2. 後ろが母音、半母音、摩擦音がなら[N\]になります。
3. 後ろが両唇音(p,,b,,m,)ならば[m]になります。
4. 後ろが両唇音(p',b',m')ならば[m']になります。
5. 後ろが軟口蓋音(k,g,N)ならば[N]になります。
6. 後ろが軟口蓋音(k',g',N')ならば[N']になります。
7. 後ろが歯茎硬口蓋音(J)ならば[J]になります。
8. それ以外ならば[n]になります。

■改版履歴

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